

CHAPTERS 13, 39 TO 78.1, AND 89
OF THE
MUNICIPAL CODE OF CHICAGO
RELATING TO
BUILDINGS

With amendments to July 1, 1959

HON. RICHARD J. DALEY, MAYOR

ALD. EMIL V. PACINI, Chairman
Committee on Building and Zoning
Chicago City Council

GEORGE L. RAMSEY
Commissioner of Buildings

Published by
INDEX PUBLISHING CORP.
19 S. Wells St., Chicago 6, Ill.

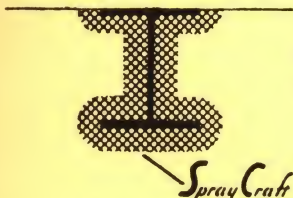
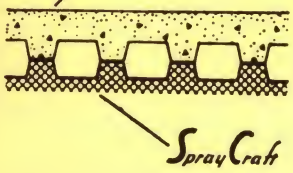
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*CHAPTER 13

DEPARTMENT OF BUILDINGS

Organization

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Organization

13-1. There is established an executive department of the municipal government of the city, which shall be known as the department of buildings. The said department shall embrace a commissioner of buildings, a deputy commissioner of buildings, an assistant commissioner of buildings, and such other officers and employees as are herein designated and such as the city council may provide by annual appropriation ordinance.

The said department shall include the office of the commissioner, administrative services, engineering services, inspection services, housing activities and compliance and enforcement services.

All officers and employees of said department shall be under the direction and supervision of the commissioner of buildings, and shall perform such duties as may be required of them by said commissioner or by provisions of this code. [Passed. Coun. J. 12-22-52, p. 3813.]

13-2. The commissioner of buildings shall be the head of said department of buildings and shall be a registered architect, or a registered structural engineer, and shall have been engaged as an architect, or a structural engineer for a period of not less than ten years prior to his appointment. During his term of office as commissioner of buildings he shall not be actively engaged in any other business. He shall be appointed by the mayor, by and with the advice and consent of the city council. The commissioner may require the officers and employees of the department of buildings to perform such duties, in addition to those herein prescribed, as he may deem necessary.

He shall prescribe the rules and regulations for the guidance of subordinate personnel and the public who have immediate dealings with the department, except where otherwise provided by order of the city council. [Passed. Coun. J. 12-22-52, p. 3813; amend. 12-30-52, p. 3911.]

13-3. The deputy commissioner of buildings shall be appointed by the commissioner of buildings according to law. The person certified to fill this office shall be either a civil, structural, or architectural engineer, or an architect, an experienced building contractor, or an efficient building mechanic with at least five years experience and training.

The deputy commissioner of buildings shall act as commissioner of buildings in the absence of the commissioner of buildings from his office, and while

*For amendments to former Chapter 13 see footnote at end of this chapter.

so acting shall discharge all the duties and possess all the powers imposed upon or vested in the commissioner of buildings. The deputy commissioner of buildings shall, under the direction of the commissioner of buildings, have general control of all matters and things pertaining to the work of the department of buildings. [Passed. Coun. J. 12-22-52, p. 3813.]

13-4. The assistant commissioner of buildings shall be appointed by the commissioner of buildings according to law. The person certified to fill this office shall be an engineer with background and training in public health or housing work of at least five years.

The assistant commissioner shall act as commissioner of buildings in the absence of the commissioner and the deputy commissioner and while so acting shall discharge all the duties and possess all powers vested in the commissioner of buildings. In addition he shall be in charge of the public relations program of the department, its in-service training program and its housing enforcement program. [Passed. Coun. J. 12-22-52, p. 3813.]

13-5. The chief of inspections shall be appointed by the commissioner according to law. The person certified to fill this position shall be a civil, structural, architectural or fire protection engineer, an architect, a building construction superintendent, or an efficient building mechanic with at least five years experience in general building construction. He shall be in charge of coordinating all inspection activities of the department. [Passed. Coun. J. 12-22-52, p. 3813.]

13-6. The secretary of the department shall be appointed by the commissioner according to law. The person certified to fill this position shall be a person qualified in office and personnel management. He shall be in charge of all clerical activities of the department. [Passed. Coun. J. 12-22-52, p. 3813.]

13-7. The chief of compliance shall be appointed by the commissioner according to law. The person certified to fill this position shall be a civil, structural, architectural or fire protection engineer, an architect, a building construction superintendent, or an efficient building mechanic with at least five years experience in general building construction. He shall be in charge of all compliance and law case activities of the department. [Passed. Coun. J. 12-22-52, p. 3813.]

13-8. The private secretary to the commissioner shall be appointed by the commissioner according to law. The person certified to fill this position shall be one well qualified to act as an administrative assistant and a private secretary. [Passed. Coun. J. 12-22-52, p. 3813.]

13-9. The chief electrical inspector shall be appointed by the commissioner according to law. The person certified to fill this position shall be an electrical engineer, or an efficient electrician with at least five years experience in electrical installations. The chief electrical inspector shall be in charge of all electrical inspection and shall enforce the electrical regulations of this code. [Passed. Coun. J. 12-22-52, p. 3813.]

13-10. The chief building inspector shall be appointed by the commissioner according to law. The person certified to fill this position shall be a civil, structural, architectural or fire protection engineer, an architect, a building construction superintendent, or an efficient building mechanic with at least five years experience in general building construction. The chief building inspector shall be in charge of all building inspections and shall enforce all building regulations of this code. [Passed. Coun. J. 12-22-52, p. 3813.]

13-11. The chief sanitary inspector shall be appointed by the commissioner according to law. The person certified to fill this position shall be a trained

sanitarian with at least five years experience in sanitary and housing code administration. He shall be in charge of all sanitary, housing and area survey inspections and shall enforce all sanitary regulations of this code. [Passed. Coun. J. 12-22-52, p. 3813.]

13-12. The chief plumbing inspector shall be appointed by the commissioner according to law. The person certified to fill this position shall be a sanitary engineer, or an efficient plumber with at least five years experience in plumbing installation work. He shall be in charge of all plumbing, tank and water heater inspections and shall enforce all plumbing regulations of this code pertaining to plumbing, tank work, and gas-fired water heaters installed on private property. [Passed. Coun. J. 12-22-52, p. 3813.]

13-13. The commissioner of buildings shall appoint, according to law, a chief elevator inspector, assistant chief elevator inspectors, elevator engineers, and such other elevator inspectors as may be provided for by the city council. The person certified to fill the position of chief elevator inspector shall be versed in the principles of electrical and mechanical engineering. He shall have had 5 years experience in the design or construction of elevators and 10 years experience as an elevator inspector. The persons certified to fill the positions of assistant chief elevator inspectors shall be versed in the principles of electrical and mechanical engineering. They shall have had 5 years experience in the design or construction of elevators and 10 years experience as elevator inspector. The persons certified to fill the positions of elevator engineers shall be versed in the principles of electrical and mechanical engineering. They shall have had 5 years experience in the design or construction of elevators, and 10 years experience as elevator inspectors. Every person certified to fill the position of elevator inspector shall have had 5 years experience as an elevator mechanic, well versed in the principles of mechanical and electrical construction.

The chief elevator inspector, under the direction of the commissioner of buildings, shall examine and approve all drawings for the installation of all elevators, mechanical equipment used for the raising or lowering of any proscenium fire curtain, or stage, orchestra floor, or any platform, dumbwaiter, escalator, and mechanical amusement device. No such elevator, dumbwaiter, escalator, mechanical equipment device, or apparatus shall be installed, nor shall any such equipment be operated without the approval of the chief elevator inspector. The chief elevator inspector shall cause such inspection to be made of all new installations as may be necessary to insure construction in accordance with the drawings approved by him. He shall cause such periodic inspections to be made of existing installations of such equipment as may be necessary to insure safe maintenance of this equipment and as required by this code. Assistant elevator inspectors shall perform all the duties of the chief elevator inspector during his absence, and such other duties as are assigned to them by the chief elevator inspector. The elevator engineers shall examine and approve all drawings and specifications for the installation and alteration of existing and new elevators.

The elevator inspectors shall inspect all elevators, mechanical equipment used for the raising or lowering of any proscenium fire curtain, or stage, orchestra floor, or any platform, dumbwaiter, escalator, and mechanical amusement device as shall be assigned to them by the chief elevator inspector.

The elevator inspectors shall make written reports daily to the commissioner of buildings as to the condition in which they find the proscenium fire curtains, elevators, dumbwaiters, escalators, mechanical equipment, devices, and apparatus inspected by them, and of any violations of the requirements of this code pertaining to such matters, together with the street and number of the premises where such violations occur, the names of the owner, agent, lessee, and occupant thereof, and if a new installation, the names of the architect, or engineer, and contractor engaged in or about the construction and installation of such equipment. [Passed. Coun. J. 12-22-52, p. 3813; amend. 7-28-54, p. 8115.]

13-14. The ventilation inspector in charge shall be appointed according to law. The person certified to fill this position shall be a mechanical engineer, or an efficient mechanic with at least five years experience in the design and installation of warm air heating, air conditioning and ventilating industrial sanitation

installation. He shall be in charge of all air conditioning and ventilation, industrial sanitation and warm air furnace inspections, and shall enforce all regulations of this code pertaining to these installations. [Passed. Coun. J. 12-22-52, p. 3813.]

Administrative Services

13-15. The bureau of administrative services shall be in charge of the secretary of the department, who with the assistance of the clerical personnel provided by the city council, shall preserve and keep all books, records, and papers belonging to the department of buildings or which are required by law to be filed therein. He shall be in charge of the complaint desk of the department and shall perform such other duties as may be required of him by the commissioner of buildings. He shall assign clerical personnel to the division offices as needed. [Passed. Coun. J. 12-22-52, p. 3813.]

Engineering Services

13-16. The commissioner of buildings shall appoint, according to law, a supervising architect who shall head the bureau of plan examination. The supervising architect shall have charge of all plan examination, engineering, cost estimating and all other related matters. He shall be a registered architect or registered structural engineer in the state of Illinois with at least five years' experience in the design and construction of buildings. In the absence of the supervising architect, a chief plan examiner, who shall be an architect, structural engineer, or an efficient architectural draftsman with at least five years' experience in the design and construction of buildings, shall be in charge of the bureau. The personnel shall consist of architectural and structural plan examiners. Other personnel shall be assigned from the bureau of zoning, ventilation and plumbing. [Passed. Coun. J. 12-22-52, p. 3813, amend. 5-28-58, p. 7794.]

13-17. The bureau of zoning shall be in charge of the chief zoning examiner, who shall be a person with at least five years experience in zoning administration and zoning code regulations. He shall be in charge of all zoning examinations required for license and permit approvals. He shall be in charge of all zoning inspectors and shall assign these inspectors to the bureau of building inspection and the bureau of housing inspection as needed. [Passed. Coun. J. 12-22-52, p. 3813.]

Inspection Services

13-18. The bureau of electrical inspection shall be in charge of the chief electrical inspector, who with the assistance of the assistant chief electrical inspector, supervising electrical inspectors and electrical inspectors provided by the city council shall make all electrical inspections and enforce all electrical regulations of this code. He shall assign supervising electrical inspectors and electrical inspectors to the various division offices of the department and to the bureau of housing inspection and compliance board as needed.

The assistant chief electrical inspector, supervising electrical inspectors and electrical inspectors shall be efficient electricians who shall have at least five years practical experience in the installation of electrical work.

The bureau of electrical inspection shall process and issue all electrical permits and shall make all electrical inspections required for the approval of licenses according to law. [Passed. Coun. J. 12-22-52, p. 3813.]

13-19. The bureau of building inspection shall be in charge of the chief building inspector, who with the assistance of the assistant chief building inspector, supervising building inspectors, and building inspectors provided by the city council, shall make all building inspections, annual building inspections, revolving door inspections, inspections of canopies and marquees, inspections of gas holders and any other inspections required by law. The bureau of building inspection shall enforce all of the building regulations of this code. The bureau shall assign supervising building inspectors and building inspectors to the various division offices of the department, to the bureau of housing inspection and to the compliance board as needed.

The assistant chief building inspector, supervising building inspectors and building inspectors shall be efficient building mechanics with at least five years practical experience in building construction. [Passed. Coun. J. 12-22-52, p. 3813.]

13-20. The bureau of plumbing inspection shall be in charge of the chief plumbing inspector, who under the direction of the chief plumbing inspector, and with the assistance of supervising plumbing inspectors and plumbing inspectors provided by the city council, shall make all plumbing and tank inspections as required by law, and shall enforce all of the plumbing regulations of this code pertaining to plumbing and tank installations on private property. He shall assign supervising plumbing inspectors and plumbing inspectors to the various division offices of the department, to the bureau of housing inspection and to the compliance board as needed. He shall assign plumbing plan examiners to the bureau of plan examination.

The assistant chief plumbing inspector, supervising plumbing inspectors and plumbing inspectors shall be efficient plumbers with at least five years practical experience in the installation of plumbing work. [Passed. Coun. J. 12-22-52, p. 3813.]

13-21. Under the direction of the commissioner of buildings, the chief elevator inspector shall be in charge of the elevator inspection bureau.

Under the supervision of the chief elevator inspector, the assistant chief elevator inspectors, elevator engineers and other elevator inspectors provided by the city council, shall make all elevator, escalator, dumbwaiter, elevators of special character, and mechanical amusement riding device inspections as defined in chapter 79; all proscenium fire curtain inspections as defined in chapter 54, as required by law.

The bureau of elevator inspection shall enforce all elevator, escalator, dumbwaiter, elevators of special character, amusement riding device and proscenium fire curtain regulations of this code.

Permits for the above installations shall be issued in the bureau of elevator inspection by the elevator engineers of the bureau of elevator inspection, under the direction of the chief elevator inspector. [Passed. Coun. J. 12-22-52, p. 3813; amend. 7-26-55, p. 882; 5-28-58, p. 7794.]

13-22. The bureau of heating, ventilation and industrial sanitation shall be in charge of the ventilation inspector in charge, who with the assistance of ventilating engineers in charge and ventilation engineers and ventilation inspectors provided by the city council, shall make all ventilating and air conditioning, industrial sanitation and warm air furnace inspections required by this code. The bureau of heating, ventilation and industrial sanitation shall enforce all of the regulations of this code pertaining to the above installations. The bureau shall assign ventilation inspectors to the compliance board as needed, and shall assign ventilation inspectors or engineers to the bureau of plan examination.

The ventilation engineers in charge shall be mechanical engineers or efficient sheet metal workers with at least five years practical experience in the installation of air conditioning or ventilating systems. Ventilation inspectors shall be efficient sheet metal workers who shall have five years practical experience in the installation of air conditioning or ventilating systems. Sheet metal furnace inspectors shall be efficient sheet metal workers who shall have at least five years practical experience in the installation of warm air furnace heating systems. [Passed. Coun. J. 12-22-52, p. 3813.]

13-23. [Passed. Coun. J. 12-22-52, p. 3813; repealed. 5-28-58, p. 7794.]

13-24. The bureau of housing inspection shall consist of two divisions as described in sections 13-25 and 13-26, each headed by an assistant chief sanitary inspector, who under the direction of the chief sanitary inspector, and with the assistance of the supervising sanitary inspectors shall have charge of all housing and survey inspections. The bureau of housing inspection shall enforce all housing regulations of this code. [Passed. Coun. J. 12-22-52, p. 3813.]

13-25. The survey inspection section shall be headed by an assistant chief sanitary inspector who under the direction of the chief sanitary inspector and with the assistance of supervising survey inspectors, shall be in charge of all of the housing survey activities of the bureau. Personnel for survey inspection work shall consist of survey inspectors provided by the city council and other inspectors assigned from the bureau of building, plumbing and electrical inspection. Neighborhood compliance activities shall be conducted by supervising survey inspectors and inspectors as needed.

Assistant chief sanitary inspectors, supervising survey inspectors and survey inspectors shall have at least five years practical experience as a sanitarian or in building maintenance and shall have had experience in public relations and administration. [Passed. Coun. J. 12-22-52, p. 3813.]

13-26. The housing complaint section shall be headed by an assistant chief sanitary inspector, who under the direction of the chief sanitary inspector and with the assistance of supervising housing inspectors and housing inspectors provided by the city council shall make all housing complaint inspections required by this code.

Housing inspectors shall have at least five years experience as a sanitarian or in building maintenance. [Passed. Coun. J. 12-22-52, p. 3813.]

Compliance and Enforcement Services

13-27. The bureau of compliance shall be headed by the chief of compliance. All law case precessing shall be in charge of the chief of compliance.

In all violations referred to the bureau of compliance, if such violation or violations have not been corrected within thirty days from date of first inspection showing such violation or violations to have existed, the bureau of compliance shall forward a request for prosecution to the corporation counsel; provided, however, that if within said thirty days the person subject to prosecution shall have presented to the bureau of compliance an executed contract for the completion of the work necessary to correct such violation or violations and shall have obtained all permits required by this code, the bureau of compliance may withhold request for prosecution for a period not to exceed forty-five days from first appearance date before the compliance board.

Compliance hearings shall be in charge of the assistant chief of compliance, who shall hold compliance hearings as necessary. The compliance hearings shall be staffed by department of building personnel as needed. [Passed. Coun. J. 12-22-52, p. 3813; amend. 5-28-58, p. 7794.]

13-28. Every employee in the department of buildings shall devote all of his efforts to such employment, and shall not be engaged in any other business or vocation. [Passed. Coun. J. 12-22-52, p. 3813.]

*NOTE. The following list shows all amendments to former Chapter 13 prior to 12-22-52:

13-1. 1-27-41, p. 4051; 1-8-45, p. 2818; 1-9-46, p. 4741; 1-16-46, p. 4936.

13-3.1. 10-28-49, p. 4950.

13-4. 10-28-49, p. 4950.

13-7.1. 1-27-41, p. 4051.

13-7.2. 1-8-45, p. 2818; 4-30-45, p. 3443.

13-7.3. 1-8-45, p. 2818; 4-30-45, p. 3443.

13-7.4. 1-9-46, p. 4741; 12-22-47, p. 1590.

13-7.5. 1-9-46, p. 4741.

13-7.6. 1-9-46, p. 4741.

13-22. 10-1-42, p. 7575; 1-31-45, p. 2981.

13-23. 10-1-42, p. 7575.

Building Board of Review

20-6.1. There is hereby created a building board of review consisting of a representative of the department of buildings, a representative of the fire department, a member of the council committee on buildings and zoning, a licensed architect or a licensed structural engineer, and a recognized fire prevention engineer. The members of such board shall be appointed by the mayor by and with the consent of the city council. The members of the board shall be appointed for a term of two years and until their successors are appointed and qualified. Ex officio members shall receive no additional compensation but may be reimbursed for their reasonable expenses. The other members shall receive not to exceed twenty-five dollars per day for each day necessarily spent in the hearing and consideration of applications for variations. [Added. Coun. J. 7-16-47, p. 701.]

20-6.2. Any person required to alter an existing hotel building to meet the requirements of the building provisions of this code, applicable to existing hotel buildings, who claims that such alteration is impractical and cannot be made in strict compliance with the ordinance without undue hardship, may, if such claim is verified by the commissioner of buildings, apply to the building board of review for a variation from such requirements. He shall file with his application, plans and specifications of the building, showing an alternative method of alteration, and deposit with the board the sum of one hundred dollars out of which the cost of the review shall be defrayed, the balance to be returned to the applicant. If the board finds that the proposed method is practical and reasonably meets the purposes for which the ordinance is enacted, it may make a finding of fact and recommend to the city council the granting of such variation. Any person aggrieved by the finding of the board may file a petition for a writ of certiorari within thirty days after the filing of the decision in the office of the board. [Added. Coun. J. 7-16-47, p. 701.]

* CHAPTER 39 ENFORCEMENT OF BUILDING, ELECTRICAL AND FIRE REGULATIONS

and of Standards of Living and Working Conditions

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|--|---|
| <p>39-1. Scope of chapter</p> <p>39-2. Persons liable</p> <p>39-3. Penalty for violation</p> <p>39-4. Construction without permit</p> <p>39-5. Architects, etc.—liability</p> <p>39-6. Injunction to secure compliance</p> <p>39-7. Stop order</p> | <p>39-8. Remedies cumulative</p> <p>39-9. Interference with officials</p> <p>39-10. Revocation of license</p> <p>39-11. Closing buildings on premises</p> <p>39-12. Demolition, repair of unsafe buildings</p> <p>39-13. Separability</p> |
|--|---|

39-1. The provisions of this chapter shall apply to chapters 39 to 92 inclusive, and to chapter 96 of this code, comprising the building, electrical and fire regulations and minimum standards of living and working conditions of this code. In interpreting and applying said provisions of this code such provisions shall in every instance be held to be the minimum requirements adopted for the protection and promotion of the public health, safety and welfare. [Passed. Coun. J. 6-30-54, p. 7829.]

39-2. Unless otherwise specifically provided, the owner, his agent for the purpose of managing, controlling or collecting rents and any other person managing or controlling a building or premises, in any part of which there is a violation of the provisions of this code enumerated in section 39-1 of this chapter, shall be liable for any violation therein, existing or occurring, or which may have existed or occurred, at or during any time when such person is or was the person owning or managing, controlling, or acting as agent in regard to said buildings or premises. Wherever used in said provisions of this code, the "owner" shall include any person entitled under any agreement to the control or direction of the management or disposition of the building or premises or of any part of the building or premises where the violation in question occurs.

The liabilities hereunder imposed on an owner shall attach to a trustee under a land trust, holding title to such building, structure or premises without the right of possession, management or control, unless said trustee in a proceeding under said provisions of this code discloses in a verified pleading or in an affidavit filed with the court, the name and last known address of each person who was a beneficiary of the trust at the time of the alleged violation and of each person, if any, who was then acting as agent for the purpose of managing, controlling or collecting rents, as the same may appear on the records of the trust. [Passed. Coun. J. 6-30-54, p. 7829.]

39-3. Any violation of, or resistance to or interference with the enforcement of, any of the provisions of this code enumerated in section 39-1 of this chapter, to which no other penalty provision is applicable shall be punished by a fine of not less than five dollars and not more than two hundred dollars, and each day such violation shall continue shall constitute a separate and distinct offense for which a fine as herein provided shall be imposed. [Passed. Coun. J. 6-30-54, p. 7829.]

39-4. Any person who causes any construction, repairs or alterations to be made in or for any building, structure, or any part thereof, without first obtaining the permit or permits required therefor by any of the provisions of this code; or fails to post such permit as provided in section 43-1 of this code; or causes any construction, repair or alterations to be made in or for any building, structure or any part thereof, contrary to the drawings or plans as approved by the appropriate departments or agencies of the city in issuing such permit or permits under this code; or causes any building, structure, or equipment thereof to be maintained or operated without, or contrary to, the certificate or certificates required therefor by any of the provisions of this code, shall be fined not less than ten dollars and not more than two hundred dollars for each day that such construction, repair or alteration, or such maintenance or operation shall have existed, without a permit or certificate fully authorizing such construction, repair or alteration, or such maintenance or operation. [Passed. Coun. J. 6-30-54, p. 7829; amend. 10-5-55, p. 1148.]

* For amendments to former Chapter 39 see **Note** at end of this Chapter

39-5. Any architect, structural engineer, contractor or builder, individual or corporate, who has designed, constructed, repaired, altered, removed or demolished any building or any part or equipment thereof in violation of or in a manner which fails to conform with the provisions of this code enumerated in section 39-1 of this chapter shall each be fined not less than twenty-five dollars and not more than two hundred dollars for each and every violation of any of the said provisions existing in such design, construction, repair, alteration, removal or demolition. [Passed. Coun. J. 6-30-54, p. 7829.]

39-6. If the appropriate official charged with the administration of any of the provisions of the code enumerated in section 39-1 of this chapter shall determine, upon due investigation, that any building or structure in the city fails to conform to the minimum standards of health and safety as set forth in the said provisions of this code, and the owner or owners of such building or structure shall fail, after due notice, to cause such property to conform with said provisions of this code, said official may, in addition to any other remedies, penalties or means of enforcement request the department of law to make application on behalf of the city to any court of competent jurisdiction for an injunction requiring compliance with said provisions of this code or for such other order as the court may deem necessary or appropriate to secure such compliance. The department of law may then institute such proceedings on behalf of the city, as provided by law. [Passed. Coun. J. 6-30-54, p. 7829.]

39-7. If any construction, alteration, installation or razing is done in or on any building, structure or premise, or any part thereof, which construction, alteration, installation or razing is in violation of any of the provisions of this code or is being done, or has been done, without the permit or permits required therefor by any of the provisions of this code, or is being done, or has been done, contrary to the drawings or plans as approved under any of the said provisions by the appropriate departments or agencies of the city in issuing such permit or permits, or if any building, structure, mechanical installation or equipment thereof is maintained or operated without or contrary to, the certificate or certificates required therefor by any of the provisions of this code, the city officials charged respectively with the administration of any of the said provisions of this code are hereby empowered and required forthwith to issue a stop order, directing such construction, alteration, installation or razing, or such maintenance or operation to cease immediately. If there is thereafter any reason to believe that further work on such construction, alteration, installation or razing is being done, or has been done, or that such maintenance or operation is being carried on, said officials shall request the department of law to proceed forthwith to sue for and obtain an injunction as provided by law against the continuing of such work, or the continuing of such maintenance or operation. [Passed. Coun. J. 6-30-54, p. 7829.]

39-8. The provisions of this code for any penalty or other method of enforcement shall not have the effect of limiting or impairing the scope, operation or effectiveness of each or any other penalty or other method of enforcement available under law for the prevention, restriction, correction or abatement of or penalty for violations of the provisions of this code enumerated in section 39-1 of this chapter. [Passed. Coun. J. 6-30-54, p. 7829.]

39-9. The appropriate officials charged with the administration of any of the provisions of this code enumerated in section 39-1 of this chapter, or any of them and their respective assistants, shall have the right to enter any building, or premises, and any and all parts thereof, at any reasonable time, and at any time when occupied by the public in order to examine such buildings or premises to judge of the condition of the same and to discharge their respective duties, and it shall be unlawful for any person to interfere with them in the performance of their duties. [Passed. Coun. J. 6-30-54, p. 7829.]

39-10. Upon a report to the mayor by the commissioner of buildings, president of the board of health, the fire commissioner or the commissioner of police, or any other appropriate official that any business for which a

license is required by any provision of this code is being conducted on premises wherein any requirement of the provisions of this code enumerated in section 39-1 of this chapter, or any proper order given by any such official in regard thereto, has been violated, or not complied with, the mayor may revoke the license of any such business and cause such business to be closed. [Passed. Coun. J. 6-30-54, p. 7829.]

39-11. The commissioner of buildings, the president of the board of health, the fire commissioner, and the commissioner of police, or any one of them, shall have the power, and it shall be their joint and several duty, to order any building or premises closed, or any structure or equipment thereof removed or its operation stopped, where it is discovered that there is any violation of any of the provisions of this code enumerated in section 39-1 of this chapter which imperils life, safety or health, and to keep same closed, removed, or shut down until such provisions are complied with. [Passed. Coun. J. 6-30-54, p. 7829.]

39-12. If any building shall be found in a dangerous and unsafe condition or uncompleted and abandoned, the commissioner of buildings or the fire commissioner shall notify in writing the owner or owners thereof, directing said owner or owners to put such building in a safe condition or to demolish it. Where, upon diligent search, the identity or whereabouts of the owner or owners of any such building shall not be ascertainable, such notice shall be mailed to the person or persons in whose name such real estate was last assessed. If, after 30 days subsequent to the giving of such notice, said owner or owners fail to put such building in a safe condition or to demolish it, the commissioner of buildings or fire commissioner may notify the department of law and recommend initiation of proceedings in accordance with this section, and upon receipt of such notification and recommendation, the corporation counsel is hereby authorized to apply to the Circuit Court of Cook County for an order authorizing the city to demolish, repair or enclose or to cause the demolition, repair or enclosure of said building.

The cost of such demolition, repair or enclosure shall be recoverable from the owner or owners of such real estate, and shall be a lien thereon as provided by law, provided that within 60 days after said cost and expense is incurred the city, or the person performing the service by authority of the city, shall file notice of lien as provided by law. [Passed. Coun. J. 6-30-54, p. 7829.]

39-13. If any provision of this chapter, or the application of any provision hereof to any person or circumstance is held invalid, the invalidity of that provision or application shall not affect any of the other provisions of this chapter or the application of that provision to persons or circumstances other than those as to which it is held invalid. [Passed. Coun. J. 6-30-54, p. 7829.]

Note: The following sections of former Chapter 39 were amended prior to its repeal on 6-30-54 (Coun. J. p. 7829):

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|---------|------------------|
| 39-1.1. | 1-20-50, p.5760. |
| 39-4.1. | 7-16-47, p.701. |
| 39-6. | 1-31-45, p.2981. |
| 39-7. | 10-1-42, p.7575. |
| 39-8. | 6-11-47, p.308. |

CHAPTER 40

FRONTAGE CONSENTS

- | | |
|--|--|
| <ul style="list-style-type: none"> 40- 1. Interpretation of terms 40- 2. Filing of consents 40- 3. Filing of plat 40- 4. Protest of property owners 40- 5. Specific uses 40- 6. Stores in residential districts 40- 7. Public places of amusement 40- 8. Tanks for flammable liquids 40- 9. Garages 40-10. Licensed homes 40-11. Hospitals 40-12. Ice and cooling plants | <ul style="list-style-type: none"> 40-13. Motor vehicle repair shops 40-14. Motor vehicle salesrooms 40-15. Reformatories and sheltering institutions 40-16. Sheds 40-17. Storage of shavings, sawdust, and excelsior 40-18. Stables and barns 40-19. Billboards 40-20. Grandstands 40-21. Temporary seating structures |
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40-1. Whenever a provision is made in this code that frontage consents shall be obtained for the construction, alteration, or enlargement of any building or structure in any block, the word "block", so used, shall not be held to mean a square, but shall be held to embrace only that part of a street bounding the square which lies between the two nearest intersecting streets, one on either side of the point at which such building or structure is to be constructed, altered, or enlarged, unless it shall be otherwise specifically provided.

In determining whether the buildings on both sides of the street are used exclusively for residence purposes, any building fronting upon another street and located upon a corner lot shall not be considered.

By "corner lot" is meant a lot situated at the junction of two streets or of a street and a public alley at least sixteen feet wide; provided, that if such alley be less than sixteen feet wide, and the lot be estimated on a line sixteen feet from the opposite side of the alley, such lot may be considered a corner lot. Any portion of the width of such lot distance more than fifty feet from such junction shall not be regarded as part of a corner lot, but shall be subject to the provisions of this code respecting other than corner lots. Where, in corner lots, the two frontages are of unequal length, the lesser street frontage shall be taken as the width of the lot. Street frontage alone, and not alley frontage, shall be considered in determining such lesser frontage.

40-2. Whenever frontage consents are required for the construction of a building or for any occupation for which a building is about to be constructed or altered, under any section of this code, such frontage consents shall be presented to the commissioner of buildings before the issuance of a permit for the erection or alteration of a building for such purposes, unless otherwise expressly provided.

40-3. No permit shall be issued for the construction or remodeling of any building in any block in which the use of buildings is restricted or regulated by the provisions of this code if such building is designed to be used for conducting therein any business or store, without first requiring the applicant for such permit to file with the commissioner of buildings a plat showing the use to which all the property in such block is devoted.

40-4. In all cases where an application for a permit is made for the construction of a new building in any square in which a majority of the buildings are used exclusively for residence purposes, or in a square on the opposite side of the street from such square so used for residential purposes, if there shall be filed with the commissioner of buildings a protest signed by not less than ten owners of property in such square so used for residential purposes, or in case the ownership of the frontage is in less than twenty persons then if signed by a majority of the owners according to frontage, the commissioner of buildings shall withhold the issuance of the permit until the city council shall have ordered a public hearing similar to that required in an act of the general assembly entitled "An Act to confer certain additional powers upon city councils in cities and presidents and boards of trustees in villages and incorporated towns concerning buildings and structures, the intensity of use of lot areas, the classification of trades, industries, buildings and structures with respect to location and regulations, the creation of districts of different classes, and the establishment of regulations and restrictions applicable thereto," in force June 28, 1921, as amended. For the purposes of this section a square shall be understood to be a plot of ground contain-

ing city lots surrounded by public ways, railway rights of way, natural boundaries, or public places.

40-5. No person shall locate or construct on any lot fronting on any street or alley in any block in which one-half of the buildings on both sides of the street are used exclusively for residence purposes, or within fifty feet of any such street, any building, structure or place used for the following purposes, without the written consent of a majority of the property owners according to frontage on both sides of such street or alley.

A gas reservoir, manufacture of gas, stock yards, slaughter house, packing house, smoke house or place where fish or meats are smoked or cured, soap factory, glue factory, size or gelatine factory, renderies, fertilizer factory, tannery, storing or scraping of raw hides or skins, lime kiln, cement or plaster of paris factory, oil cloth or linoleum factory, factory for the manufacture of rubber from the crude material, saw mill or planing mill, wood working establishment, starch factory, glucose or dextrine factory, textile factory, laundry run by machinery, factory combined with a foundry, iron or steel works, brass or copper works, sheet metal works, blacksmithing or horseshoeing shop, boiler making, foundry, smelter, metal refinery, machine shop, stone or monument works run by machinery, asphalt manufacture or refining, paint or varnish factory, oil or turpentine factory, printing ink factory, tar distillation or manufacture, tar roofing, tar paper or tarred fabric factory, ammonia, chlorine, or bleaching powder factory, celluloid factory, place for the distillation of wood or bones, lamp black factory, sulphurous acid, sulphuric acid, nitric or hydrochloric acid manufacture, factories or other manufacturing establishments using machinery or emitting offensive or noxious fumes, odors or noises, storage warehouses, storing or baling of junk or scrap paper or rags, shoddy manufacture or wool scouring, second hand store or yard, medical dispensary, or incineration or reduction of garbage, offal, dead animals or refuse.

40-6. No person shall construct or convert a building for the business of selling meats, poultry, fish, butter, cheese, lard, vegetables or any other provisions located in any block in which all the buildings are used exclusively for residence purposes, without first securing the written consent of three-fourths of the property owners according to frontage on both sides of the street in the block in which the building to be constructed or converted is located.

40-7. No person shall locate or construct any building or structure designed or intended to be used, or use any building, structure or lot for a public place of amusement, as defined in chapter 104.1 of this code, on any street in any block in which two-thirds of the buildings on both sides of the street are used exclusively for residence purposes, without the written consent of a majority of the property owners according to frontage on both sides of the street in such block.

No person shall locate or construct any building or structure designed or intended to be used, or use any building, structure or lot for a public place of amusement of the character hereinafter described in any square in which two-thirds of the buildings on both sides of the streets surrounding the square are used exclusively for residence purposes, without the written consent of a majority of the property owners according to frontage on each side of any street surrounding such square: cabaret, bowling alley, skating rink, swimming pool, amusement park, basketball, baseball, football, hockey, tennis, track or field games and races on animals or vehicles.

40-8. No person shall install any tank for the storage or sale of any of the liquids included in the definition of flammable liquids in section 60-2 in any lot or plot of ground without first obtaining the written consents of property owners representing the majority of the total frontage in feet of any lot or plot of ground lying wholly or in part within lines one hundred and fifty feet distant from and parallel to the boundaries of the lot or plot of ground upon which said tank is to be installed; provided, however, that for the purpose of this section only the frontage of any such lot or plot of ground or that part of the frontage of any part of such lot or plot of ground as comes within the one hundred and fifty foot limit herein prescribed shall be considered.

Whenever the lot or plot of ground in which such tank is to be installed is in any shape other than a rectangle the one hundred and fifty foot limiting line aforementioned shall not exceed in distance one hundred and fifty feet from any point in the boundaries of such lot or plot of ground.

All petitions containing such consents of property owners shall be based on and contain the legal description of the property affected.

No such tank shall be installed in any lot or plot of ground where any of the boundaries of such lot or plot of ground are within two hundred feet of the nearest boundary of any lot or plot of ground used for a school, hospital, church, or theater. Provided, however, that the provisions of this paragraph shall not apply to the installation of a tank containing any of the liquids mentioned in section 60-2 having a flash point above one hundred and sixty-five degrees Fahrenheit when such liquids are to be used for heating purposes in the building or buildings for which said tank is installed.

Frontage consents shall not be required for the installation of a tank containing any of the liquids mentioned in section 60-2 when such liquids are to be used for heating purposes in the building or buildings for which such tank is installed or when such liquids are to be stored or sold within a garage building in connection with and incidental to the garage business therein conducted or where such liquids are used in a manufacturing plant and are essential to the manufacturing business therein conducted; provided, however, that where such liquids having a flash point below one hundred and sixty-five degrees Fahrenheit are sold or offered for sale outside of a garage building or any other building frontage consents shall be required in accordance with this section.

40-9. No person shall locate or construct any garage within the territory bounded by the Chicago river on the north, by Halsted street on the west, by Lake Michigan on the east, and by Van Buren street on the south, any part of which is within eighty feet, or the entrance or exit to or from which, for the use of motor vehicles, is within one hundred and sixty feet of any portion of the street front of any building used as and for a hospital, church, or public or parochial school, or such entrance or exit of which is upon a street containing street car tracks and within one block of the entrance of a street railway tunnel, or which shall house, within said distance of one hundred and sixty feet of such street front, more than seventy-five cars.

It shall be unlawful to locate or construct any garage within two hundred feet of any building used as and for a hospital, church, or public or parochial school, or the grounds thereof, in any portion of the city outside of the territory above named.

Nor shall any person locate or construct any public garage in the city, on any lot in any block in which dwelling houses, apartment houses, and hotels constitute one-half or more of the buildings on both sides of the street in the block, or within one hundred feet on any such street in any such block, without the written consent of a majority of the property owners according to frontage on both sides of the street; provided, that all lots which abut only on a public alley or court shall be considered as fronting on the street to which such alley or court leads. It shall not be deemed inconsistent with the character of a building as a dwelling house, apartment house, or hotel under this section that a part thereof is used for retail business purposes if a separate part of such building with a total floor area greater than the floor area used for business is used for residence purposes. In determining whether dwelling houses, apartment houses, and hotels constitute one-half or more of the buildings on both sides of the street in any block, any building fronting upon another street and located upon a corner lot shall not be considered.

40-10. No person shall construct a home, as defined in section 136-1, in any block in which two-thirds of the buildings fronting on both sides of the street or streets on or along which the proposed home may face are devoted exclusively to residence purposes, unless the owners of a majority of the frontage in such block and the owners of a majority of the frontage on the opposite side or sides of the street or streets on or along which said building faces, consent in writing to the construction of any such home in such block. Such written consents of the majority of said property owners shall be filed with the board of health before a permit shall be granted for the constructing of any such home.

No such home shall hereafter be located on a lot or plot of ground the nearest lot line of which is within 200 feet of the nearest boundary of any lot or plot of ground used for a school. [Amend. Coun. J. 11-7-58, p. 8380.]

40-11. No person shall construct a hospital, as defined in section 137-1, in any block in which two-thirds of the buildings fronting on both sides of the street or streets on or along which the proposed hospital may face are devoted exclusively to residence purposes, unless the owners of a majority of the frontage in

such block and the owners of a majority of the frontage on the opposite side or sides of the street or streets on or along which said building faces consent in writing to the construction of any such hospital in such block. Such written consents of the majority of said property owners shall be filed with the board of health before a permit shall be granted for the building or construction of any such hospital.

40-12. No person shall locate or construct any ice-making house or cooling plant, or any building used for the storage of ice, in any block in which two-thirds of the buildings fronting on both sides of the street on which the proposed plant shall be located are devoted exclusively to residence purposes, unless the owners of the majority of the frontage in said block on both sides of the street on which said plant is located shall consent in writing to the location or construction of such plant in such block. Any person violating any of the provisions of this section shall be fined not less than five dollars nor more than one hundred dollars for each offense, and a separate offense shall be regarded as having been committed for each day during which such violation shall continue.

40-13. No person shall locate or construct any automobile repair shop within two hundred feet of any building used as and for a hospital, church, or public or parochial school or the grounds thereof.

Nor shall any person locate or construct any automobile repair shop in the city on any lot in any block in which two-thirds of the buildings on both sides of the street are used exclusively for residence purposes, or within one hundred feet of any such street in any such block, without the written consent of a majority of the property owners according to frontage on both sides of the street; provided, that all lots which abut only on a public alley or court shall be considered as fronting on the street to which such alley or court leads.

40-14. No person shall locate or construct any automobile salesroom within two hundred feet of any building used as and for a hospital, church, or public or parochial school or the grounds thereof.

Nor shall any person locate or construct any automobile salesroom in the city on any lot in any block in which two-thirds of the buildings on both sides of the street are used exclusively for residence purposes, or within one hundred feet of any such street in any such block, without the written consent of a majority of the property owners according to frontage on both sides of the street; provided, that all lots which abut only on a public alley or court shall be considered as fronting on the street to which such alley or court leads.

The provisions of this section shall apply only where the premises are of such a nature that automobiles, autocars or any similar self-propelled vehicles are or may be admitted thereto.

40-15. No person shall construct any reformatory, rescue or sheltering institution in any block or square in which one-half of the buildings on both sides of the street or streets on which the proposed reformatory, rescue or sheltering institution or the grounds thereof may face are used exclusively for residence purposes, without the written consent of a majority of the property owners, according to frontage on both sides of the streets bounding such square.

40-16. No open shelter sheds to be used for the icing of cars or for the storage or handling of coal, brick, stone, cement, salt or other such commodities shall be built upon any lot or parcel of ground fronting upon any street within two hundred feet of any building used exclusively for residence purposes, unless the consent of the owners of the majority of the frontage on both sides of such street between the two nearest intersecting cross streets shall first have been obtained by the person desiring to erect and maintain such shed.

40-17. No person shall construct any building designed or intended to be used for the purpose of storing shavings, sawdust or excelsior therein within the city in any block in which one-half of the buildings fronting on both sides of the street on which the proposed building shall be located are devoted exclusively to residence purposes unless the owners of the majority of the frontage in such

block on both sides of the street on which said building is located shall consent in writing to the construction of said building in such place.

40-18. No person shall construct any boarding, sales or private stable or barn for the stabling or keeping of horses on the front two-thirds of any lot on any street where one-half of the buildings on both sides of the street between the next nearest intersecting streets are used exclusively for residence purposes, without the written consent of a majority of the property owners according to frontage on both sides of the street.

No person shall construct any building or structure for the stabling or keeping of ten or more horses within a distance of four hundred feet from any school, church, hospital, public park or public playground.

40-19. No person shall erect or construct any billboard or signboard in any block on any public street in which one-half of the buildings on both sides of the street are used exclusively for residence purposes without first obtaining the consent in writing of the owners or duly authorized agents of said owners owning a majority of the frontage of the property on both sides of the street in the block in which such billboard or signboard is to be erected or constructed. Such written consents shall be filed with the commissioner of buildings before a permit shall be issued for the erection or construction of such billboard or signboard.

40-20. Every person desiring a permit for the construction of a grandstand, except in connection with such as are now in existence, shall first obtain the consent in writing of the owners of a majority of the frontage on both sides of the street or streets on each side of the block or square in which it is desired to erect such grandstand.

40-21. An applicant for a permit to erect temporary seating structures for shows and outdoor exhibitions and the observation of holidays and special occasions shall secure the written consent of a majority of the property owners, or their duly authorized agents, on both sides of the street on which said temporary seating structure is to be located, in the block between the two nearest intersecting streets before said permit shall be issued.

* CHAPTER 41

ADMINISTRATION OF ZONING, BUILDING AND HOUSING PROVISIONS

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| 41- 1. Powers and duties
41- 2. Personal liability
41- 3. Rules
41- 4. Precedence of chapter provisions
41- 5. Decisions of commissioner
41- 6. Investigation of complaints | 41- 7. Compliance and enforcement
41- 8. Open excavations
41- 9. Dangerous buildings—posting
41-10. Removal of notice
41-11. Warrants for collection |
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41-1. The commissioner of buildings shall institute such measures and prescribe such rules and regulations for the control and guidance of his subordinate officers and employees as shall secure the careful inspection of all zoning uses and all buildings, structures and mechanical installations for which a permit is required, while in the process of construction, erection, repair, demolition, or removal and the strict enforcement of the several provisions of this code, relating to existing buildings and premises.

It shall be the duty of the commissioner of buildings to administer and enforce the provisions of this code that relate to zoning uses of property and to the erection, construction, alteration, repair, demolition, or removal and safety of buildings and structures and their related mechanical installations, and the use of buildings and premises with the exception of those provisions which by their terms are to be under the direct and immediate supervision of the board of health or of the bureau of fire prevention, or of such other departments, or officers of the city designated by such code provisions. [Passed. Coun. J. 6-30-54, p. 7832.]

41-2. In all cases where any action is taken by the commissioner of buildings to enforce the provisions of this code, whether such action is taken in pursuance of the express provisions of a particular section or in a case where discretionary power is given by this code to the commissioner of buildings, such acts shall be done in the name of and on behalf of the city, and the said commissioner of buildings in so acting for the city shall not render himself liable personally, and he is hereby relieved from all personal liability from any damage that may accrue to persons or property as a result of any such act committed in good faith in the discharge of his duties, and any suit brought against said commissioner of buildings by reason thereof shall be defended by the corporation counsel until the final termination of the proceedings therein. The commissioner of buildings shall be saved harmless from all costs or fees arising from such legal action. [Passed. Coun. J. 6-30-54, p. 7832.]

41-3. The commissioner of buildings may adopt rules not inconsistent with the building, plumbing and ventilation provisions of this code with reference to materials and workmanship in construction, repair, equipment or maintenance of buildings, structures or premises except when the administration of any chapter or section is specifically placed in another official or department. Said rules shall be published and shall be kept always on file in the office of the commissioner of buildings and copies of all such rules shall be transmitted to the city council at the first regular meeting held after the adoption of same. [Passed. Coun. J. 6-30-54, p. 7832.]

41-4. In case of any conflict between the provisions of the various chapters administered or enforced by the commissioner of buildings, the stricter provision shall govern. [Passed. Coun. J. 6-30-54, p. 7832.]

41-5. Whenever the commissioner of buildings shall refuse to approve an application for a permit or a license because of a violation of the zoning provisions of this code, the said commissioner shall issue upon request a written refusal to approve such application. Upon receipt of such a refusal, the said applicant may

*NOTE: Former Chapter 41 (Building Standards and Tests) repealed 6-30-54, Coun. J. p. 7832.

file an application for an appeal from the decision of the said commissioner as provided by law. [Passed. Coun. J. 6-30-54, p. 7832.]

41-6. It shall be the duty of the commissioner of buildings to cause an investigation to be made of all complaints made to the department which come within its jurisdiction. A record of such investigation shall be kept on file together with the reports and findings signed by the inspector or inspectors. [Passed. Coun. J. 6-30-54, p. 7832.]

41-7. When such investigation or investigations, whether upon complaint or otherwise, shall disclose violation or violations of zoning provisions or of chapters 39 to 92, inclusive, or chapters 96 and 99 of this code do, in fact, exist and are likely to endanger life and safety in cases of fire, panic, or other accident or endanger or impair the health of any occupants of any building, structure or place covered by the regulations of this Code, the commissioner of buildings shall give notice in writing to the owner, occupant, lessee or person in possession, charge or control of such building, structure, premises or place to make such changes, alterations or repairs, or to perform such work, or to take such action as the provisions of the code, or the safety or health of any person, in or about such building, structure, premises or place, may require within such time as shall be designated by the commissioner of buildings, which shall in no event exceed fifteen days after the service of such notice.

In case the changes, alterations, repairs or requirements ordered by the notice of the commissioner of buildings are not made or performed to the satisfaction of the commissioner of buildings within the time specified in said notice, he shall make returns of such violations of this code, or of any default of such notice, to the corporation counsel for prosecution.

The records of such investigations, including inspections of said building, structure, premises and contents thereof, shall be preserved as public records and shall be admitted in the trial of said cause as prima facie evidence as to the contents thereof. [Passed. Coun. J. 6-30-54, p. 7832; amend. 5-28-58, p. 7795.]

41-8. Whenever an open excavation exists which constitutes a danger to the public by reason of its depth or proximity to public ways or walks, the commissioner of buildings shall have power to order in writing the owner to fill such open excavation with solid dry fill only, or to fence such open excavation adequately, setting forth in said order a period of thirty days for compliance therewith. Any owner who fails to comply with said order shall be fined not less than ten dollars and not more than two hundred dollars for each day said order is not complied with after the expiration of the thirty days specified therein. [Passed. Coun. J. 6-30-54, p. 7832.]

41-9. Whenever a building or structure or part thereof shall have been damaged by fire, deterioration or other cause, or shows clear evidence of structural failures and where it constitutes an actual and imminent danger to the public, the commissioner of buildings shall have the power to order said building, structure or part thereof vacated and closed and to order any licensed and bonded wrecking contractor forthwith to remove said building or structure or part thereof. When the commissioner of buildings has ordered a building, structure or part thereof vacated and closed as provided in the first paragraph of this section or if the provisions of notice to the owner or owners as provided in section 39-12 of this code have been complied with, the commissioner of buildings may post or cause to be posted in a conspicuous place near each entrance to the building or structure in letters not less than two inches high, a notice substantially as follows:

"THIS BUILDING IS IN DANGEROUS CONDITION AND ITS USE OR OCCUPANCY HAS BEEN PROHIBITED BY THE COMMISSIONER OF BUILDINGS"

Whenever any building, structure or part thereof shall have been vacated and shall have been posted with a sign as hereinbefore specified, it shall be unlawful for any person or persons to enter such building except for the express purpose of wrecking or removing or repairing same as directed by said notice. [Passed. Coun. J. 6-30-54, p. 7832.]

41-10. It shall be unlawful for any person to remove, cover or obliterate any notice or notices lawfully posted by the commissioner of buildings, without the written permission of the commissioner of buildings. [Passed. Coun. J. 6-30-54, p. 7832.]

41-11. Whenever any work such as wrecking, razing, tearing down, shoring or underpinning, cleaning up, filling, barricading or fencing shall have been done at city expense either by direct order of the commissioner of buildings or under a contract negotiated by the department of purchases, contracts and supplies, the commissioner shall cause a warrant for collection to be issued to the owner of record. No permits shall be issued for any work for which a permit is required nor shall any license be approved for any such premises for which any such charge shall remain unpaid. [Passed. Coun. J. 6-30-54, p. 7832.]

CHAPTER 42

REGISTRATION FOR BUILDING WORK

- 42-1. Registration required
- 42-2. Excavating work
- 42-3. Masonry work
- 42-4. Warm air furnace work

- 42-5. Liability for building violations
- 42-6. Reinstatement
- 42-7. Waiver of fees
- 42-8. Penalty

42-1. Every person, firm or corporation engaged in the business of constructing, altering, repairing, removing, or demolishing the whole or any part of buildings or structures, or the appurtenances thereto in the city, shall, before undertaking the erection, enlargement, alteration, repair, removal or demolition of any building or structure, for which permits are required by this code, register the name and address of such person, firm or corporation in a book kept by the commissioner of buildings and used for this purpose. In the case of a firm or corporation the names of each individual comprising the firm and the names of each officer of a corporation shall be so registered. No permit shall be granted for the erection, enlargement, alteration, repair, removal, or demolition of any building or structure unless the name and address of the person that is about to undertake such work is contained in the registration book kept for that purpose. [Amend. Coun. J. 11-29-49, p. 5095.]

42-2. When application is made for a permit for excavating work only, the provisions of section 42-1 shall not apply to any person licensed as an excavator.

42-3. When application is made for a permit, and the work of construction involves masonry construction only, the provisions of section 42-1 shall not apply to any person licensed as a mason contractor or employing mason. Where the work of construction, for which a permit is sought, involves construction other than masonry construction, any mason contractor or employing mason, licensed as aforesaid, engaged in or undertaking the work of such construction other than masonry construction, must register his name, and comply with the requirements of this chapter before a permit for such work is issued.

42-4. No person, firm or corporation engaged in the business of constructing, altering, repairing, removing or demolishing buildings or structures as provided in this chapter, shall advertise in a newspaper or otherwise that they are so engaged, without first having been registered as provided herein. Any such advertisement shall state that the advertiser is a registered contractor as provided by law. [Repealed. Coun. J. 4-2-41, p. 4549; new section. 11-29-49, p. 5095.]

42-5. If any person registered as provided by this chapter, shall fail in the execution of any work for which a permit was issued, to comply with the provisions of this code relative to the erection, enlargement, alteration, repair, removal, or demolition of any building, or part thereof, either the commissioner of buildings or the president of the board of health may bring suit and prosecute such person for such failure or violation, and in case of conviction, his name shall be stricken from the said registration book and shall not be re-entered or reinstated during such time as any violation exists or any judgment remains unsatisfied with regard to said conviction.

42-6. Any person that shall have been convicted under the preceding section and shall have had his name stricken from such registration book may have such name re-entered therein on filing with the commissioner of buildings a certificate signed by the corporation counsel, the commissioner of buildings and the president of the board of health to the effect that all violations of ordinances with reference to which conviction was secured have been corrected or are non-existent and that all claims and judgments arising from such convictions have been paid.

42-7. [Repealed. Coun. J. 11-29-49, p. 5095.]

42-8. Any person violating, or resisting or opposing the enforcement of any of the provisions of this chapter, where no other penalty is provided, shall be fined not less than twenty-five dollars nor more than two hundred dollars for each offense. Each day such violation shall continue shall constitute a separate and distinct offense; and any builder or contractor who shall construct any building in violation of the provisions of this chapter, and any architect who shall design, draw plans for, or have supervision of such building, or who shall permit it to be constructed, shall be liable for the penalties imposed by this section.

CHAPTER 43

BUILDING PERMITS

Permit requirements

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Permit Requirements

43-1. It shall be unlawful to proceed with the erection, enlargement, alteration, repair, removal, or demolition of any building, structure, or structural part thereof within the city unless a permit therefor shall have first been obtained from the commissioner of buildings. Such permit shall be posted in a conspicuous place upon the exterior of the premises for which it is issued, and shall remain so posted at all times until the work is completed and approved. [Amend. Coun. J. 10-5-55, p. 1148.]

43-2. A permit shall not be required for any minor repairs, as may be necessary to maintain existing parts of buildings, but such work or operations shall not involve the replacement or repair of any structural load-bearing members, nor reduce the means of exit, affect the light or ventilation, room size requirements, sanitary or fire-resistive requirements, use of materials not permitted by the building provisions of this code, nor increase the height, area, or capacity of the building.

43-3. Applications for building permits shall be in such form as shall be prescribed by the commissioner of buildings. Every such application for a permit shall be accompanied by a copy of every recorded easement on the lot on which the building is to be erected, and on the immediately adjoining lots, showing the use or benefit resulting from such easement. All such applications shall be accompanied by drawings, plans, and specifications in conformity with the provisions of this chapter. Where alterations or repairs in buildings are made necessary by reason of damage by fire, that fact shall be stated in the application for a permit. In such cases, before a permit shall issue, the commissioner of buildings shall cause a thorough inspection to be made of the damaged premises with the view of testing the structural integrity of the damaged parts. No permit shall be issued by the commissioner of buildings for the construction, erection, addition to or alteration of any building or structure unless the applicant therefor shall furnish to the said commissioner a certificate or other written evidence of the proper federal officer or agency that the proposed construction is not prohibited by any order, rule or directive of an agency of the United States government. [Amend. Coun. J. 4-15-42, p. 6862; 11-5-42, p. 7712; 9-18-45, p. 3922; 11-26-46, p. 6579.]

43-4. All drawings and plans for the construction, erection, addition to, or alterations of any building or other structure, for which a permit is required shall first be presented to the commissioner of buildings for examination and approval as to proper use of building and premises and as to compliance in all other respects with the Chicago zoning ordinance and shall thereafter be

presented to the board of health, the department of smoke inspection, fire department, department of water and sewers, department of streets and sanitation, department of boiler inspection, and department of public works for submission to the proper official of these departments and bureaus for his examination and approval with regard to such provisions of this code, as are within the duty of such office to enforce, and after said drawings and plans have been examined and passed upon, the same shall be returned to the commissioner of buildings where they shall be taken up for examination and approval by the commissioner of buildings.

In every new building and in every existing building undergoing extensive remodeling where a new electric service or a new electric distribution center is to be installed, ample space shall be provided within the main walls of the building for the electric service equipment, metering equipment, distribution cabinets, cutout cabinets, transformers and other equipment necessary for an electric installation and ample working space around the said equipment. This space shall be readily accessible to every tenant of said building who has electric equipment for light, heat or power which is supplied through the above mentioned equipment. [Amend. Coun. J. 7-26-55, p. 882; 11-7-58, p. 8380.]

43-5. Before any building permit is issued, the applicant shall produce evidence that he has filed with, and had approved by, the commissioner of public works, an indemnifying bond protecting the city against any and all damages that may arise to the public ways upon which such building abuts, and to the city, and to any person, in consequence or by reason of, the proposed operations to be authorized by such permit, or by reason of any obstruction or occupation of any public ways in and about such building operations.

43-6. Before the commissioner of buildings issues a permit, as provided in this chapter, the applicant shall pay in advance for the water to be used in the work under such permit in accordance with the provisions of section 185-27 of this code. [Amend. Coun. J. 3-13-45, p. 3143.]

43-7. At the proper time, notice shall be given by the commissioner of buildings to the applicant that his plans have been examined and are ready to be returned to him, and if such plans have been approved as submitted to the various departments and bureaus as aforesaid, the commissioner of buildings shall, according to the building provisions of this code, issue a permit for the construction, erection, repair, or alteration of such building or structure; and shall file such application, and shall apply to such plans a final official stamp, stating that the drawings to which the same has been applied comply with the building provisions of this code. The plans so stamped shall then be returned to such applicant.

43-8. No permit shall issue for the construction, erection, repair, or alteration of any building or structure designed or intended for use as a garage or any other business, the operation of which will require a driveway across a public sidewalk, until the applicant therefor has first obtained from the commissioner of streets and sanitation a permit for driveway or driveways as prescribed by sections 33-14 to 33-22 inclusive. [Amend. Coun. J. 6-16-54, p. 7730.]

43-8.1. No permit shall issue for the construction, erection, repair or alteration of any building or structure if in one or more walls abutting a public way windows or other openings are placed below the level of such public way, the lighting or ventilation of which will require the use of subsidewalk space, until the applicant therefor has first obtained specific authority for such use as provided in section 34-1. [Added. Coun. J. 7-14-43, p. 442.]

43-9. If, after a building or other required permit shall have been granted, the operations called for by such permit shall not be begun within six months after the date thereof, such permit shall be void and no operations thereunder shall be begun or completed until an extended permit shall be taken out by the owner or his agent, and a fee of twenty-five per cent of the original cost of permit shall be charged for such extended permit; provided, however, that in no case shall a permit be issued or renewed for a fee less than two dollars. An extended permit shall be valid for six months following the date of expiration of the original permit and must be applied for within ten days after the expiration of the original permit. Two extensions only shall be granted and if work is not begun within eighteen months after the date of issuance of the original permit, all rights under the permit shall thereupon terminate by limitation. Where, under authority

of a permit, or extended permit, work has begun and has been abandoned for a continuous or cumulative period of twelve months, all rights under such permit shall thereupon terminate by limitation.

43-10. It shall be unlawful for any owner, agent, architect, structural engineer, contractor, or builder engaged in erecting, altering, or repairing any building to make any departure from the drawings or plans, as approved by the commissioner of buildings, of a nature which involves any violation of the provisions of this code on which the permit has been issued. Any such departure from the approved drawings and plans involving a violation of requirements, shall operate to annul the permit which has been issued for such work and shall render the same void.

Where any work done under a permit authorizing erection, alteration, or repair of a building or structure, is being done contrary to the approved drawings and plans, the commissioner of buildings or the president of the board of health shall have power to stop such work at once and to order all persons engaged thereon to stop and desist therefrom, which work shall not be resumed until satisfactory assurance has been given to the commissioner of buildings or the president of the board of health, as the case may be, that it will be according to the approved drawings and plans. Nothing in this paragraph shall be construed to prevent minor changes in arrangement or decoration which do not affect the requirements of any provisions of this code.

43-11. No person shall begin any work for which a building permit is required or any work of excavation in preparation therefor until the permit has been obtained. If any person violates this section the commission of buildings shall order the work stopped at once and enforce that order in addition to the penalty for the violation. [Amend. Coun. J. 10-1-42, p. 7558.]

43-12. Permits for the obstruction of streets shall be issued by the commissioner of streets and sanitation; and before any permit shall be granted to any person, for the obstruction of any street or sidewalk, an estimate of the cost of restoring said street and sidewalk, to a condition equally as good as before it was obstructed with a fair additional margin for contingent damages, shall be made by the commissioner of streets and sanitation. Such estimate shall in no case be less than two dollars per foot, or fractional part thereof, for the frontage of the portion of the street to be obstructed, and a deposit shall be required of the person desiring to obstruct such street or sidewalk. Such deposit, less the charge of five dollars per month for each twenty-five feet of frontage used, shall be returned upon the restoration of the said street and sidewalk to a condition equally as good as before it was obstructed.

When the commissioner of streets and sanitation shall receive satisfactory proof that said street and sidewalk have been restored to a condition equally as good as before it was obstructed, he shall issue a certificate to the comptroller certifying to said fact, and the comptroller shall thereupon forthwith issue a warrant on the city treasurer for the amount of money thus deposited for costs which it, the city, may suffer or be put to, or which may be recovered from it by reason of the issuance of such permit, or by reason of any act or thing done or neglected to be done under or by virtue of the authority given in such permit and the requirements of the provisions of this code. Any permit issued pursuant to the terms of this section may be revoked for cause by the commissioner of streets and sanitation at any time. [Amend. Coun. J. 6-16-54, p. 7730.]

43-13. It shall be unlawful for any person to erect or construct any canopy attached to a building or structure under any provision of this code or any special ordinance, any part of which canopy shall project over a public way or public place, without first submitting the plans of such canopy, and also of the part of the building or other structure to which it is to be attached, to the commissioner of buildings for his approval. No permit shall be issued by the department of public works unless the plans of such canopy shall have been approved by the department of buildings and a permit to attach said canopy to the building from which it is intended to project shall have been obtained from the commissioner of buildings. No canopy that has been or may hereafter be authorized by any provision of this code or any special ordinance shall at any time be inclosed by canvas or other cloth or material in whole or in part so as to obstruct free passage underneath same, or so as to obstruct or reduce any required exit width.

43-13.1. It shall be unlawful for any person to erect or construct any platform in excess of twenty-four inches in height for temporary use in any public assembly unit, open air assembly unit, or any public place of assembly, to be used for speakers, displays, orchestras, entertainers, or spectators, unless the plans for such platform have been submitted to and approved by the department of buildings and a permit for such use is issued by the commissioner of buildings. The construction of such platform shall conform to the requirements of chapter 61 of this code. No such permit shall be issued for a term longer than fifteen days and no such temporary platform shall be permitted to remain in use in excess of fifteen days without a reinspection thereof having been made by the department of buildings and a new permit issued therefor. [Added. Coun. J. 3-30-44, p. 1665; amend. 12-30-49, p. 5579.]

43-14. The size, number, and location of power or heating boilers to be installed in any building shall be marked on the plans, and, except in single dwellings, shall be approved by the department for the inspection of steam boilers, unfired pressure vessels and cooling plants, and by the department of smoke inspection and abatement, before a permit is issued by the department of buildings for the erection of such building.

43-15. Before proceeding with the construction, installation, or alteration of any elevator or mechanical equipment used for the raising or lowering of any curtain, stage, or orchestra floor, platform lift, dumbwaiter, escalator, or mechanical amusement device or apparatus, application for a permit for such construction, installation, or alteration shall be submitted to the commissioner of buildings either by the owner or agent of the building, or of the premises on which such equipment is to be installed. A permit shall be obtained for any alteration in such elevator equipment except that this requirement shall not apply to the replacement of existing parts with other parts which are identical with those which are replaced.

The application for a permit shall specify the number and kind of equipment which it is desired to install, or the nature of the alteration to be made and the location of the building, structure, or premises, and shall be accompanied by such drawings and specifications as shall be necessary to inform said commissioner of the plan of construction, type of elevator, dumbwaiter, escalator, platform lift, or mechanical amusement device, method of alteration, and the location thereof. Every application for a permit for a mechanical amusement device shall also be accompanied by a detailed drawing and description of the construction proposed, with a certificate signed by an architect or engineer certifying to the strength and safety of such device. If such drawings and specifications show that the equipment is to be installed or altered in conformity with the building provisions of this code, the commissioner of buildings shall approve the same and shall issue a permit to such applicant upon the payment by such applicant of the permit fee hereinafter named. It shall be unlawful for any owner, agent, or contractor to permit or allow the installation or alteration of any such equipment until a permit has been obtained, and the permit fee paid. [Amend. Coun. J. 7-26-55, p. 882.]

43-16. It shall be unlawful for any person to erect or construct any fence more than five feet in height within the city limits without first obtaining a permit from the commissioner of buildings.

43-17. No person shall be permitted to move any building which has been damaged to an extent greater than fifty per cent of its value by fire, decay, or otherwise; nor shall it be permissible to move any frame building of such character as is prohibited to be constructed within the fire limits to any point within the fire limits; nor shall it be permissible to move any building to a location at which the uses for which such building is designed are prohibited by this code. Permits for the moving of frame buildings, other than those the moving of which is herein prohibited, shall be granted upon the payment of a fee of ten cents for each one thousand cubic feet of volume, or fractional part thereof of such building, and upon securing and filing the written consent of two-thirds of the property owners according to frontage on both sides of the street in the block in which such building is to be moved. No permit shall be issued to move any building used or designed to be used for purposes for which frontage con-

sents are required until frontage consents in the block to which such building is to be moved have also been secured and filed as required by the provisions of this code relating to such use.

No building used for residence or multiple dwelling purposes shall be moved from one lot to another or from one location to another upon the same lot unless the space to be occupied on such lot shall comply with the provisions of chapter 52 of this code. [Amend. Coun. J. 1-9-46, p. 4742; 12-30-49, p. 5579.]

43-18. Any person desiring to install a tank for the storage of any flammable liquids, as provided in chapter 60 of this code, shall first obtain a permit from the commissioner of buildings; provided, however, that no permit shall be required for an aggregate capacity of tanks of one hundred twenty gallons or less for class I and class II liquids, nor for an aggregate capacity of tanks of five hundred fifty gallons or less for class III and class IV liquids. The application for the permit shall be made by the owner or his agent as required by this chapter. Before issuing such permit the commissioner of buildings shall first cause to be inspected, the location or site where such tank is to be installed, and if the site is satisfactory, such permit shall be issued upon the payment of fees hereinafter provided. Such permit shall not be assigned nor shall any right or privilege thereunder be transferred or assigned except by the written consent of the commissioner of buildings.

Every application for a permit for any such tank shall be in writing, stating the location, the space desired to be used, the length, breadth, and depth, together with the measurement in feet from the surface of the ground to the top of such tank, and shall contain the plans and specifications for the construction of said tank, its connections, fittings, openings, and safety appliances, all as required by chapter 60 of this code. No such tank or equipment shall be covered or used until the installation, material, and workmanship have been finally inspected, approved, and certified by the department of buildings.

Nothing in this section shall be construed as requiring any owner or occupant of a building, or his agent, to obtain a permit for the use, nor to prohibit the use by him of oils, paints, varnishes or similar flammable mixtures unless the storage is to be maintained longer than thirty days, or the aggregate quantities are in excess of one hundred twenty gallons for class I or class II liquids, or in excess of five hundred fifty gallons for class III or class IV liquids. [Amend. Coun. J. 12-30-49, p. 5579.]

43-19. Before proceeding with the wrecking or tearing down of any building or other structure, a permit for such wrecking or tearing down shall first be obtained by the owner or his agent from the commissioner of buildings, and it shall be unlawful to proceed with the wrecking or tearing down of any building or structure or any structural part of such building or structure unless such permit shall first have been obtained. Application for such permit shall be made by the owner, or his agent, to the commissioner of buildings, who shall issue said permit upon such application and the payment of the fee herein provided for.

Every application shall state the location and describe the building which it is proposed to wreck or tear down. Upon the issuance of said permit, such building may be wrecked or torn down, provided that all the work done thereunder shall be subject to the supervision of the commissioner of buildings and to such reasonable restrictions as he may impose in regard to elements of safety and health; and provided further, that the work shall be kept sprinkled and sufficient scaffolding be provided to insure safety to human life, and to comply with the provisions of the act of the General Assembly passed June 3, 1907, in force July 1, 1907, providing for the safety of workmen in and about the construction and removal of buildings. [Amend. Coun. J. 3-10-47, p. 7331; 4-25-47, p. 106; 9-19-57, p. 5998.]

43-20. Before any permit is issued granting authority to wreck a building or structure for which such permit is required, the person engaged in the work of wrecking the same shall file with the city clerk a bond with sureties to be

approved by the city comptroller to indemnify, keep and save harmless the city against any loss, cost, damage, expense, judgment, or liability of any kind whatsoever which the city may suffer, or which may accrue against, be charged to or be recovered from said city, or any of its officials from or by reason or on account of accidents to persons or property during any such wrecking operations, and from or by reason or on account of anything done under or by virtue of any permit granted for any such wrecking operations.

Such bond in each case shall extend to and cover all such wrecking operations carried on through permits obtained thereunder by such person during any year beginning January first and ending December thirty-first, and no permit shall be issued for any wrecking work, except as hereinbefore otherwise provided during such year until such bond is filed. Said bond shall be in the penal sum of twenty thousand dollars for all wrecking operations on such buildings and other structures not more than three stories in height, and there shall be an additional bond filed in the penal sum of twenty thousand dollars or a bond in the penal sum of forty thousand dollars shall be filed in the first instance in case of wrecking operations on buildings and other structures four or more stories in height, and there shall be an additional bond filed in the penal sum of five hundred dollars, conditioned upon the restoring and leveling of the premises upon which such wrecking operations have been completed.

Upon the filing of such bond or bonds, the person engaged in the work of wrecking such buildings and other structures may obtain permits for such wrecking operations as are authorized under the said bond or bonds as hereinabove provided for, during the year in which the same is or are filed; provided, however, that in case of accident or casualty in the progress of any wrecking operations carried on under any permit so issued, or the happening of any circumstance which might, in the opinion of the commissioner of buildings, render such bond or bonds inadequate, the said commissioner may, in his discretion, require such additional bond as he may deem necessary to fully protect the city from loss resulting from the issuance of such permits before he allows the work to proceed or before any additional permits are issued by him. [Amend. Coun. J. 6-26-45, p. 3730.]

43-21. The administrator of public works of the United States or such other authority as may be created by acts of Congress with power to co-operate with the city in the making of public improvements, the department of public works, the department of streets and electricity, and the fire department may engage in the work of wrecking of buildings and structures, and in such cases where any of these agencies make application for a permit to wreck buildings or structures, the commissioner of buildings shall issue such permit without the fee provided herein and shall not require the filing of a bond with sureties as provided heretofore in section 43-20.

43-22. It shall be unlawful for any person to construct, replace or install any warm air heating furnace, with appurtenances, ducts, or registers, without first obtaining a permit from the commissioner of buildings for such work, as provided by this chapter.

43-23. Before any mechanical amusement device, roller coaster, scenic railway, water chute, or other mechanical riding, sailing, sliding, or swinging device is erected, either in existing or new amusement parks, or places or sites where such devices are operated under carnival, fair, or similar auspices, a detailed plan shall be submitted to the commissioner of buildings for his approval or rejection, and if approved, a permit shall be procured by the person desiring to erect such device.

43-24. If the work in, upon, or about any building or structure shall be conducted in violation of any of the building provisions of this code, it shall be the duty of the commissioner of buildings to revoke the permit for the building or wrecking operations in connection with which such violation shall have taken place. It shall be unlawful, after the revocation of such permit, to proceed with such building or wrecking operations unless such permit shall first have been

reinstated or re-issued by the commissioner of buildings. Before a permit so revoked may be lawfully re-issued or reinstated, the entire building and building site shall first be put into condition corresponding with the requirements in the building provisions of this code, and any work or material applied to the same in violation of any of the provisions shall be first removed from such building, and all material not in compliance with the building provisions of this code shall be removed from the premises.

Permit Fees

43-25. Fees for the issuance of permits for new buildings, alterations, and other structures and other permits shall be payable to the city collector when such permits are issued, as required by this chapter.

43-26. Permit fees shall be charged as follows:

(a) Single car garage, two car garage, sheds and shelter sheds:	
For each 1,000 cubic feet of volume or fractional part.....	\$ 3.00
Minimum charge	7.50
(b) New buildings or other structures, except those included in (a):	
For each 1,000 cubic feet of volume or fractional part.....	.90
Minimum charge	15.00
Volume computations under (a) and (b) shall include every part of the building from the basement to the highest point of the roof and include bay windows and other projections.	
(c) Alterations and repairs to any structures:	
For the first \$1,000 of estimated cost.....	6.00
For each additional \$1,000 of estimated cost.....	2.25
Minimum charge	15.00
(d) Shoring, raising, underpinning or moving any building:	
For each 1,000 cubic feet of volume or fractional part.....	.30
Minimum charge	15.00
(e) Wrecking any building or other structure more than one-story in height:	
For each 25 lineal feet of frontage or fractional part.....	10.00
Minimum charge	15.00
(f) Fire escape, erection or alterations:	
Four stories or less in height.....	15.00
Each story above four	2.00
(g) Canopy or marquee, erection or alteration.....	
	15.00
(h) Chimneys, isolated or over 50 feet above any roof.....	
	15.00
(i) Tanks, above roof or tower:	
400-gallon capacity or less.....	10.00
Over 400-gallon capacity	20.00
Structural supports for tank over 400-gallon capacity.....	20.00
(j) Elevators and escalators—power-operated, five floors or less in height, installed or altered.....	
	15.00
Each additional floor above five.....	3.00
Hand operated	10.50
Platform lift	10.50
Theater curtains	37.50
Stage or orchestra platforms.....	15.00

Dumbwaiters—power-operated—five floors or less in height, installed or altered	\$15.00
Each additional floor above five.....	3.00
Hand operated—five floors or less in height.....	10.00
Each additional floor above five.....	2.00
Temporary Construction Towers over 50 feet in height.....	15.00
(k) Amusement devices, mechanical riding, sliding, sailing or swinging:	
Portable—For each assembly or installation.....	10.00
Permanent—Installed or altered	82.50
Temporary seating stands	55.00
(l) Ventilating systems—mechanical, supply or exhaust:	
Capacity—3,000 cubic feet of air per minute.....	8.25
For each additional 1,000 cubic feet per minute.....	2.25
Increase in capacity, each 1,000 cubic feet per minute.....	2.25
Capacity shall be the sum of supply and exhaust	
Warm air furnaces, each	10.00
(m) Fences over 5 feet high, 100 lineal feet.	7.50
Each additional 100 lineal feet or part thereof.....	2.25
(n) Tanks for flammable liquids (each):	
Classes I and II:	
Capacity 121 to 500 gallons	16.50
Each additional 1,000 gallons or fraction thereof.....	.50
Classes III and IV:	
Capacity 121 to 550 gallons	5.00
Capacity 551 to 1,000 gallons	16.50
Each additional 1,000 gallons or fraction thereof.....	.30
(o) Temporary platforms for public assembly units.....	16.50
(p) Roof of any building, recoating or recovering.....	5.00
(q) Billboards and signboards, erection, construction, or alteration:	
Up to 150 square feet	4.00
151 to 225 square feet	6.00
226 to 375 square feet	10.00
For each additional 375 square feet or fractional part thereof.....	10.00

provided, however, that where such signboard or billboard does not exceed sixty-five square feet in area and is attached to the surface of a permanent building, in accordance with the provisions of that part of chapter 61 dealing with billboards and signboards, and is designed to give publicity to the business carried on within such building, such as the name and address of owner and the nature of business, but in no event to advertise any article manufactured by any other person, and no part of said sign is more than eighteen feet above the average inside grade at the front of the building, no fees for erection shall be charged, but not more than one sign of sixty-five square feet shall be allowed for each twenty-five lineal feet of frontage, unless the fees for erection are paid as herein provided; and provided further, that where such signboard or billboard does not exceed twenty square feet in area and is attached to the surface of a permanent building in accordance with the aforesaid provisions of chapter 61 and is designed to give publicity to some article sold on the premises, and no part of said sign is more than eighteen feet above the average inside grade at the front of the building, no fees for the erection shall be charged; and provided also, that where such signboard or billboard does not exceed twenty-four square feet in area, when attached to the front, sides, or rear walls of any building, so that the flat surface of the same is against the building, or when erected on the ground, if not erected nearer than ten feet to any building, structure, other signboard or public sidewalk, which is used to advertise the sale or lease of the property upon which it shall be erected, no fees for erection shall be charged.

[Repealed—new section passed. Coun. J. 11-18-47, p. 1191; amend. 11-30-53, p. 6100; 12-22-53, p. 6490; 7-26-55, p. 882; 5-28-58, p. 7794; 5-28-58, p. 7796.]

BUILDING PERMITS

43-28. [Repealed. Coun. J. 11-18-47, p. 1191.]

43-29. [Repealed. Coun. J. 11-18-47, p. 1191.]

43-30. [Amend. Coun. J. 3-5-41, p. 4397; 3-30-44, p. 1665; 2-27-45, p. 3076; repealed. 11-18-47, p. 1191.]

43-31. [Repealed. Coun. J. 1-10-47, p. 6863.]

43-32. [Amend. Coun. J. 3-13-45, p. 3143; repealed. 1-10-47, p. 6863.]

43-33. Fees for the approval of floor load placards required by chapter 68 shall be charged as follows: ten dollars for each ten thousand square feet of floor area or less; for more than ten thousand square feet of floor area and not to exceed fifty thousand square feet of floor area, fifteen dollars; for each additional fifty thousand square feet of floor area in excess of the first fifty thousand square feet of floor area, fifteen dollars additional; and for issuing new placards in place of lost placards, the fee shall be: for ten thousand square feet or less, five dollars; for more than ten thousand square feet, ten dollars. For the purpose of determining the amount of the fee herein required to be paid, every part of a structure separated by dividing walls as required by chapter 51 shall be considered as a separate building. [Amend. Coun. J. 12-30-49, p. 5579; 11-30-53, p. 6100.]

43-34. A fee of fifteen dollars shall be paid to the city collector for the approval of plans, and inspection, and test, of any plumbing within any building containing not more than five plumbing fixtures. An additional fee of two dollars and twenty-five cents shall be paid for every plumbing fixture in excess of five within such building. [Amend. Coun. J. 11-18-47, p. 1191; 11-30-53, p. 6100.]

43-35. [Repealed. Coun. J. 11-18-47, p. 1192.]

43-36. [Repealed. Coun. J. 11-18-47, p. 1192.]

43-37. [Repealed. Coun. J. 11-18-47, p. 1192.]

Violation of Chapter Provisions

43-38. [Amend. Coun. J. 6-11-47, p. 308; repealed 6-30-54, p. 7829.]

CHAPTER 44

BUILDING CERTIFICATES

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| 44-1. Certificates required | 44-5. Multiple dwelling advance occupancy |
| 44-2. Capacity of public buildings | 44-6. Multiple dwelling shafts and partitions |
| 44-3. Amusements | 44-7. Multiple dwelling violations |
| 44-4. Multiple dwelling occupancy | 44-8. Penalty |

44-1. Certificates of occupancy and other certificates shall be required as provided in this chapter, except as otherwise required by chapter 46 for certificates of compliance.

44-2. The commissioner of buildings shall determine the number of persons which every building or room used for public purposes may accommodate according to the provisions of chapter 48 of this code, and shall certify the same to the bureau of fire prevention and the city clerk. No more than the number so certified shall be allowed in such room at any one time, in any building used for a hospital, business unit, theater, open air assembly unit, public assembly unit, church, or school. [Amend. Coun. J. 12-30-49, p. 5579.]

44-3. No license shall be issued to any person to produce, operate, or offer for gain or profit any theatricals, shows or amusements until the commissioner of buildings, the board of health, the fire commissioner, and the commissioner of streets and electricity shall have certified in writing that the room or place where it is proposed to produce, operate, or offer such theatricals, shows, or amusements complies in every respect with the provisions of this code relating to their respective departments.

44-4. No multiple dwelling hereafter erected, shall be occupied in whole or in part for human habitation until the issuance by the commissioner of buildings of a certificate that the said building conforms to the general, special and structural requirements in the building provisions of this code applicable to new multiple dwellings. Within five days from date of application for any such certificate, a certificate of occupancy shall be issued or the official concerned shall state in writing his reasons for his refusal to issue said certificate. [Amend. Coun. J. 5-28-58, p. 7794.]

44-5. The certificate above referred to may be issued in the case of a new building comprising more than three apartments so as to allow the occupancy of any completed section of the building extending from the basement to the roof in advance of the completion of the other portions of the building, when such portion is completely cut off from other parts of the building by a standard fire separation and all provisions for exits required by the building provisions of this code have been complied with.

44-6. [Repealed. Coun. J. 5-28-58, p. 7794.]

44-7. If a multiple dwelling hereafter erected is occupied as a place of habitation in any of its parts in violation of this chapter, it shall forthwith be

subject to notice from the commissioner of buildings, and shall be vacated upon such notice, and shall not again be occupied until made to conform with the building provisions of this code, nor until after the issuance of the certificates required in this chapter.

44-8. Any person violating, or resisting or opposing the enforcement of, any of the provisions of this chapter, where no other penalty is provided, shall be fined not less than twenty-five dollars nor more than two hundred dollars for each offense. Each day such violation shall continue shall constitute a separate and distinct offense; and any builder or contractor who shall construct any building in violation of the provisions of this chapter, and any architect who shall design, draw plans for, or have supervision of such building, or who shall permit it to be constructed, shall be liable for the penalties provided by this section.

BUILDING PLANS

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| 45- 1. General requirements | 45- 9. Filing of drawings and plans |
| 45- 2. Architect's or engineer's seal | 45-10. Plans at construction site |
| 45- 3. Architect's or engineer's
certification | 45-11. Alterations upon stamped plans |
| 45- 4. Approval of preliminary plans | 45-12. Filing of plat |
| 45- 5. Approval of working drawings | 45-13. Fire escape stairway |
| 45- 6. Encroachment on public domain | 45-14. Tanks for flammable liquids |
| 45- 7. Foundations below datum | 45-15. Warm air furnaces |
| 45- 8. Harbor structures | 45-16. Penalty |

45-1. All plans and drawings for buildings or for structures other than buildings shall be presented to the commissioner of buildings for his approval, and each set of plans presented, shall be approved by the commissioner of buildings before a permit will be granted. All such plans and drawings shall be drawn to a scale of not less than one-eighth of an inch to the foot, on paper or cloth, in ink, or by some process that will not fade or obliterate. All distances and dimensions shall be accurately figured, and drawings made explicit and complete, showing the lot lines and the entire sewerage and drain pipes and the location of all plumbing fixtures within such building or structure.

45-2. No plans shall be approved for permit unless such plans are signed and sealed either by an architect licensed to practice architecture, as provided by the *Illinois Architectural Act*, or by a structural engineer licensed to practice structural engineering, as provided by the *Illinois Structural Engineering Act*, or by a registered professional engineer licensed to practice professional engineering as provided by the *Illinois Professional Engineering Act*, provided, however, that the person who signs and seals such plans shall be permitted to do so within the limitations of the particular act under which he is licensed to practice, and provided further, that plans for installations which involve the design of or changes in the supporting structure or which materially affect the structural loadings must be signed and sealed by an architect or structural engineer duly licensed as aforesaid. [Amend. Coun. J. 7-22-49, p. 4609.]

45-3. It shall be unlawful for any architect or structural engineer or professional engineer or other person permitted under the laws of the state to make drawings and plans, to prepare or submit to the commissioner of buildings, for his approval, any final drawings or plans for any building or structure, which do not comply with the requirements in the building provisions of this code. It shall be the duty of the commissioner of buildings to require that all drawings and plans submitted to him for approval, for any building or structure, shall be accompanied by a certificate of such architect or structural engineer or professional engineer preparing such drawings and plans, that said drawings and plans comply with the requirements in the building provisions of this code. [Amend. Coun. J. 7-22-49, p. 4609.]

45-4. The commissioner of buildings may in his discretion, issue a permit for the construction of a building or structure, or part thereof, upon the approval of preliminary drawings and plans, a true copy of which shall be filed with the commissioner of buildings, and before the entire working drawings and plans and detailed statements of said building have been completed and submitted for approval, if such preliminary drawings and plans and detailed statements shall be of sufficient clarity to indicate the nature and character of the work proposed and to show their compliance with the building provisions of this code; provided, however, that the complete working drawings and plans shall be submitted to the commissioner of buildings before construction is permitted. The commissioner of buildings shall check the completed drawings and plans and if approved shall stamp his official approval thereon as provided by section 43-7.

45-5. All working drawings which are used in the construction of buildings or structures shall be either made or checked by the architect or engineer re-

sponsible for the design, who shall certify thereon that such drawings conform to the approved design drawings on which the permit is based. This certification shall cover the size of wood or concrete members, the size and weight of structural steel members, and the size, length, and bending of concrete reinforcement together with the adequacy of all connections.

45-6. The commissioner of buildings shall not issue any permit authorizing the construction, erection, repair, or alteration of any building or structure unless the drawings and plans submitted for his approval clearly show that such building or structure with all its appurtenances, foundations, and parts can be erected entirely within the limits of the lot or tract of land upon which it is proposed to erect such building or structure, except as otherwise provided by this code, and no permit to erect, repair, or alter any building or structure shall authorize the use of, or encroachment upon, any part of any public way or public place for the construction of, or maintenance of, such building or structure, except as hereinafter provided, and except as otherwise provided by this code; nor shall any permit be issued for the construction or maintenance of any balcony or canopy extending over any public way or public place unless permits therefor have been obtained from the department of public works pursuant to a special ordinance specifically authorizing the same. The drawings and plans of every building or structure which show that any part of said building or structure, or any of its appurtenances, or attachments thereto, extend over any part of any public way or public place than as hereinafter provided shall, previous to being submitted to the commissioner of buildings, be submitted to the commissioner of public works and notice thereby given to him of the proposed encroachment upon any public way or public place. Proof of such notice to the commissioner of public works shall accompany drawings and plans when the same are presented to the commissioner of buildings.

45-7. When the plans for new buildings or structures involve foundations, piles, piers, or footings extending lower than twenty-five feet below city datum, the plans for such foundations shall be submitted to the city engineer for advice as to the presence or proximity of any public utility. Whenever application is made for a permit to erect any building or structure with a foundation, or part thereof, designed to extend to a depth of forty feet, or more, below city datum, the plans of said building or structure shall be submitted to the city engineer and his approval secured before a permit is issued by the commissioner of buildings for the erection of such building or structure.

45-8. No building or structure shall be erected within forty feet of any part of the harbor of the city without first obtaining a permit in writing from the commissioner of public works as provided in section 38-35 and paying the fees provided for in section 38-36 of this code.

45-9. True copies of the drawings and plans bearing the approval stamp of the commissioner of buildings shall be filed with the department of buildings and shall remain on file in that office for a period of six months after the occupation of such building, after which upon demand, such drawings and plans shall be returned by the commissioner of buildings to the person by whom they have been deposited. It shall not be obligatory upon the commissioner of buildings to retain such drawings and plans in his custody for more than six months after the occupation of the building to which they relate.

45-10. In all construction work for which a permit is required, the approved and stamped drawings, plans, and permit shall be kept on file at the construction site while the work is in progress.

45-11. It shall be unlawful to erase, alter, or modify any lines, figures, or coloring contained upon drawings or plans bearing the approval stamp of the commissioner of buildings or filed with him for reference. If during the progress of the execution of such work, it is desired to deviate in any manner affecting the construction or other essentials of the building from the terms of the application or drawing, notice of such intention to alter or deviate shall be given to the commissioner of buildings and an amended plan showing such alteration or deviation shall be submitted for his approval, and his written assent shall first be obtained before such alteration or deviation shall be made.

45-12. At the time of applying for a permit for the erection of, alteration of, addition to, or moving of any building or structure, the applicant shall submit to the commissioner of buildings a plat of the lot, showing the dimensions of the same and the position to be occupied by the proposed building, or by the building to be altered or added to, or by the buildings to be moved thereon, and the position of any other building or buildings that may be on the lot. The measurements shall in all cases be taken at the top of the first story and shall not include any portion of any public way or public place. Each application for a building permit shall be accompanied by a plat in duplicate, drawn to scale and in such form as may be prescribed by the commissioner of buildings, showing the actual dimensions of the lot to be built upon, the size of the building to be erected, its position on the lot, and such other information as may be necessary to provide for the enforcement of the regulations contained in the building provisions of this code. A careful record of such applications and plats shall be kept in the office of the commissioner of buildings.

45-13. No permit for a fire escape stairway shall be granted unless a detailed plan for such fire escape stairway approved by an architect or a structural engineer shall be submitted to the commissioner of buildings, and a copy of such plans shall be filed with said commissioner. No change in the position or the removal of any existing fire escape or stairway shall be made, nor shall any change in the position of any stairway or fire escape be permitted unless the written consent of the commissioner of buildings shall be first obtained. [Amend. Coun. J. 2-27-45, p. 3076; 5-28-58, p. 7794.]

45-14. Every application for a permit to install a tank or tanks for flammable liquids shall be made to the commissioner of buildings and shall be accompanied by a plat of survey showing the location and dimensions of all the property coming within the frontage area, the name and address of the owner or owners of each parcel of ground coming within such area, including the filling station site, and the total frontage in feet, with the consents of the required majority of such frontage.

In any location where a driveway or driveways across a public sidewalk are required in connection with the installation of a tank for flammable liquids, a permit shall not be issued until the applicant therefor has first obtained from the commissioner of public works a permit for the driveway or driveways as prescribed by sections 33-14 to 33-22 inclusive, of this code.

45-15. Every application for a permit to construct, replace, or install any warm air heating furnace shall be made to the commissioner of buildings and shall be accompanied by drawings or plans, and such specifications or statements as shall be required to show all details of construction and mechanical devices for approval of the commissioner of buildings before the issuance of such permit.

45-16. Any person violating, or resisting or opposing the enforcement of, any of the provisions of this chapter, where no other penalty is provided, shall be fined not less than twenty-five dollars nor more than two hundred dollars for each offense. Each day such violation shall continue shall constitute a separate and distinct offense; and any builder or contractor who shall construct any building in violation of the provisions of this chapter, and any architect who shall design, draw plans for, or have supervision of such building, or who shall permit it to be constructed, shall be liable for the penalties provided by this section.

CHAPTER 46

BUILDING INSPECTION

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| <p>46- 1. Duty of commissioner of buildings</p> <p>Buildings</p> <p>46- 2. Inspection required</p> <p>46- 3. Certificate of compliance</p> <p>46- 4. Floor plan</p> <p>46- 5. Notice of non-compliance</p> <p>16- 6. Fees</p> <p>46- 7. Fee exemptions</p> <p>Curtains</p> <p>46- 8. Fee</p> <p>Amusement parks and devices</p> <p>46- 9. Buildings</p> <p>46-10. Devices</p> <p>Elevators, dumbwaiters, escalators and movable platforms</p> <p>46-11. Inspection required</p> <p>46-12. Certificate of compliance</p> <p>46-13. Non-compliance</p> <p>46-14. Power to stop operation</p> <p>46-15. Fee</p> <p>Grandstands</p> <p>46-16. Inspection required</p> <p>46-17. Fee</p> <p>Billboards, signs, and signboards</p> <p>46-18. Inspection required</p> <p>46-19. Notice of non-compliance</p> <p>46-20. Demolition for non-compliance</p> <p>46-21. Posting non-compliance notice</p> <p>46-22. Bond</p> <p>46-23. Fees</p> <p>46-24. Penalty</p> <p>Illuminated roof signs</p> <p>46-25. Inspection required</p> | <p>46-26. Bond</p> <p>46-27. Revocation and removal</p> <p>46-28. Fees</p> <p>46-29. Penalty</p> <p>Canopies and marquees</p> <p>46-30. Inspection required</p> <p>46-31. Fees</p> <p>Mechanical refrigerating systems</p> <p>46-32. Fees</p> <p>46-33. Fee exemptions</p> <p>Revolving doors</p> <p>46-34. Inspection required</p> <p>46-35. Certificate</p> <p>46-36. Fee</p> <p>Tanks for flammable liquids</p> <p>46-37. Inspection required</p> <p>46-38. Notice of non-compliance</p> <p>46-39. Fee</p> <p>Mechanical ventilating systems</p> <p>46-40. Inspection required</p> <p>46-41. Fee</p> <p>Gas holders</p> <p>46-42. Inspection required</p> <p>46-43. Fee</p> <p>Other tanks</p> <p>46-44. Inspection required</p> <p>46-45. Fee</p> <p>Boilers and unfired pressure vessels</p> <p>46-46. Fees</p> <p>46-47. Fee exemptions</p> <p>Violation of chapter provisions</p> <p>46-48. Penalty</p> |
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46-1. The commissioner of buildings shall cause to be inspected annually or semi-annually, or otherwise, such buildings, structures, equipment, sites, or parts thereof, as shall be provided by this chapter, or as otherwise required in the building provisions of this code.

Buildings

46-2. The commissioner of buildings and his assistants shall make an annual inspection of all theaters, churches, schools, public assembly units, and open air assembly units; and also all buildings over one story in height, except single dwellings, multiple use buildings consisting of business and dwelling units two stories or less in height, and multiple dwellings three stories or less in height, unless such multiple dwellings are lodging or rooming houses with sleeping accommodations for twenty or more persons. It shall be the duty of every owner, agent, lessee, or occupant of any such building and of the person in charge or control of the same to permit the making of such annual inspection by the commissioner of buildings or by a duly authorized building inspector at any time upon demand being duly made. [Amend. Coun. J. 2-25-43, p. 8412.]

46-3. Whenever any such inspection shows the building to be in compliance with the requirements of this code with respect to stairways, means of egress,

and all other respects, it shall be the duty of the commissioner of buildings to issue, or cause to be issued, a certificate setting forth the result of such inspection, containing the date thereof, and a statement to the effect that such building complies in all respects with the provisions of this chapter or complies with all building provisions of this code under which such building was constructed, upon the payment of the inspection fee herein required; provided, however, that such certificate shall be issued for charitable, religious, or educational institutions as otherwise provided by section 46-7. It shall be the joint and several duty of the owner, agent, lessee, or occupant of the building so inspected, and of each and every person in charge and control of the same to frame the said certificate and place it in a conspicuous place near the main entrance of such building.

46-4. It shall be the joint and several duty of the owner, agent, lessee, or occupant of every building described in section 46-2 to provide a typical floor plan of such building reproduced on a sheet eight and one-half by eleven inches in size; provided, however, that no such typical plans shall be required for multiple occupancy buildings which have not been altered or converted into smaller units subsequent to the original construction in buildings not over three stories in height. Said plan shall be drawn on as large a scale as will be practicable on such sheet, and said sheet shall also state the street address of such building and shall give the class of the building, the kind of construction used therein, the height and number of stories contained therein, and the nature of the occupancy. It shall also be the joint and several duty of such owner, agent, lessee, or occupant to deliver a copy of said sheet and plan to the commissioner of buildings and to frame a copy of said sheet and place the same near the framed certificate hereinabove required. It shall also be the joint and several duty of the said owner, agent, lessee, or occupant to substitute a new sheet for the sheet on file with the commissioner of buildings, and also the sheet framed as above required, whenever such changes or alterations are made in such building as will affect the substantial accuracy of the sheet previously furnished said commissioner and framed as above required. [Amend. Coun. J. 3-30-44, p. 1664.]

46-5. Where the result of such inspection shall show that such building fails in any respect to comply with the building provisions of this code, it shall be the duty of the commissioner of buildings to notify the owner, agent, lessee, or occupant of such building to this effect and to specify wherein such building fails to comply with the requirements of the building provisions of this code; and it shall thereupon become the joint and several duty of such owner, agent, lessee, or occupant to proceed forthwith to make whatever changes or alterations may be necessary to make such building comply in all respects with the requirements of the building provisions of this code, and to complete such changes and alterations within thirty days after the receipt of such notice.

46-6. The fee for annual inspection of buildings shall be paid to the city collector and shall be based on the number of square feet of floor area as follows:

Not to exceed 25,000 square feet.....	9.00
Each additional 25,000 square feet, or fractional part thereof	6.00

For the purpose of determining the amount of the fee every part of a building or structure separated by dividing walls as required by the provisions of chapter 51 of this code shall be considered as a separate building. [Amend. Coun. J. 11-18-47, p. 1191; 12-30-49, p. 5579; 11-30-53, p. 6100.]

46-7. The inspection fee required by this chapter for the annual inspection of buildings shall not be charged against any charitable, religious, and educational institutions, when the building, or part thereof, so inspected, is located in or upon premises used or occupied exclusively and owned by such charitable, religious or educational institution, if such charitable, religious, or educational

institution is not conducted or carried on for private gain or profit; provided, however, that every application for exemption from such fees shall be supported by the affidavit of one or more taxpayers of the city, as to such facts.

Hospitals, dispensaries and homes which are operated without a charge being made for the care of patients shall be exempt from the payment of such annual inspection fees. Operators of such institutions shall file with their claim for exemption from such fees an affidavit stating that no charge is made for the care of patients or inmates. Any hospital, dispensary and home which is exempt by specific ordinance from the payment of annual license fees as provided in chapters 118, 136 and 137, shall also be exempt from the payment of the annual inspection fees required by section 46-6 of this code for the period covered by the special ordinance. [Amend. Coun. J. 3-18-43, p. 8431.]

Curtains

46-8. The fee for semi-annual inspection of an iron or steel curtain shall be thirty dollars; for semi-annual inspection of an asbestos curtain, nine dollars. [Amend. Coun. J. 11-18-47, p. 1191; 11-30-53, p. 6100.]

Amusement Parks and Devices

46-9. The commissioner of buildings shall inspect, or cause to be inspected, all buildings to be used for purposes of exhibition, amusement, or entertainment, which are attended by the public, that are within or connected with an amusement park, each year before said buildings are open to the public, for the purpose of ascertaining whether they comply with the provisions of this code and the rules and regulations of the department of buildings. The fee for such annual inspection shall be six dollars for each building so inspected. [Amend. Coun. J. 11-18-47, p. 1191.]

46-10. The commissioner of buildings shall inspect, or cause to be inspected annually, all amusement devices, mechanisms, and structures, other than riding devices and other than buildings, within an amusement park, for the purpose of ascertaining whether they comply with the provisions of this code and the rules and regulations of the department of buildings; and the fee for such annual inspection shall be twelve dollars for each device, mechanism, and structure so inspected. The commissioner of buildings shall inspect annually, or cause to be inspected, all amusement devices operated by animals or by other motive power and all other riding, sliding, sailing, swinging, or rolling devices situated on any lot or tract of land outside of any amusement park before said devices are opened to the public. Where said devices are taken down, removed, and re-assembled or re-erected in another location, the commissioner of buildings shall inspect or cause said devices to be reinspected after each removal and before said devices are opened to the public, for the purpose of ascertaining whether they comply with the provisions of this code and the rules and regulations of the department of buildings. A fee, as provided in section 43-30 shall be paid for every such annual inspection or reinspection. [Amend. Coun. J. 11-18-47, p. 1191.]

Elevators, Dumbwaiters, Escalators, and Movable Platforms

46-11. Every elevator, movable stage, movable orchestra floor, platform lift, dumbwaiter, or escalator now in operation, or which may hereafter be installed, together with the hoistway and all equipment thereof, shall be inspected under and by the authority of the commissioner of buildings at least once every six months, and in no case shall any new equipment be placed in operation until an inspection of the same has been made. It shall be the duty of every owner, agent, lessee, or occupant of any building wherein any such equipment is installed, and of the person in charge or control of any such equipment to permit the making of a test and inspection of such elevator, dumbwaiter, or escalator, and all devices used in connection therewith upon demand being

made by the commissioner of buildings or by his authorized elevator inspector within five days after such demand has been made. [Amend. Coun. J. 7-26-55, p. 882.]

46-12. Whenever any elevator, movable stage, movable orchestra floor, platform lift, dumbwaiter, or escalator has been inspected and the tests herein required shall have been made of all safety devices with which such equipment is required to be equipped and the result of such inspection and tests show such equipment to be in good condition, and that such safety devices are in good working condition and in good repair, it shall be the duty of the commissioner of buildings to issue or cause to be issued a certificate setting forth the result of such inspection and tests and containing the date of inspection, the weight which such equipment will safely carry and a statement to the effect that the shaft doors, hoistway, and all equipment, including safety devices, comply with all applicable provisions of chapter 79 of this code, upon the payment of the inspection fee required by the provisions of this code. It shall be the joint and several duty of the owner, agent, lessee, or occupant of the building in which such equipment is located and of each person in charge or control of such equipment to frame the certificate and place the same in a conspicuous place in each elevator and near each dumbwaiter, movable stage, movable orchestra floor, platform lift, or escalator. The words "safe condition" in this section shall mean that it is safe for any load up to the approved weight named in such certificate. [Amend. Coun. J. 7-16-52, p. 2819; 7-26-55, p. 882.]

46-13. Where the result of such inspection or tests shall show that such elevator, movable stage, movable orchestra floor, platform lift, dumbwaiter, or escalator is in an unsafe condition or a bad repair, or shall show that any of the safety devices, which are required by the provisions of chapter 79 of this code, have not been installed or if installed, are not in good working order or not in good repair, such certificate shall not be issued until such elevator, its hoistway, and its equipment, or such dumbwaiter, movable stage, movable orchestra floor, platform lift, or escalator, or such device or devices have been put in good working order. [Amend. Coun. J. 7-16-52, p. 2819; 7-26-55, p. 882.]

46-14. Whenever any elevator inspector finds any elevator or dumbwaiter, its equipment and hatchway, including doors, or any escalator, movable stage, movable orchestra floor, or platform lift in an unsafe condition, he shall immediately report the same to the elevator inspector in charge, who shall report it to the commissioner of buildings, together with a statement of all the facts relating to the condition of such equipment. It shall be the duty of the commissioner of buildings, upon receiving from the elevator inspector in charge a report of the unsafe condition of such equipment and hatchway, including doors, to order the operation of such equipment to be stopped and to remain inoperative until it has been placed in a safe condition and it shall be unlawful for any agent, owner, lessee, or occupant of any building wherein any such equipment is located, to permit or allow the same to be used after the receipt of a notice from the commissioner of buildings, which notice is in writing, that such equipment is in an unsafe condition and until it has been restored to a safe and proper condition as required by the provisions of this code. [Amend. Coun. J. 7-16-52, p. 2819; 7-26-55, p. 882.]

46-15. The fee for semi-annual inspection of an elevator, movable stage or orchestra floor or platform lift, dumbwaiter, or escalator shall be nine dollars.

The fees herein required shall be paid either at the time application is made for inspection or upon the completion of such inspection and tests. [Amend. Coun. J. 11-18-47, p. 1191; 11-30-53, p. 6100; 7-26-55, p. 882.]

Grandstands

46-16. The commissioner of buildings shall inspect, or cause to be inspected, all tiers of seats and grandstands each year before the same are opened to the public for the purpose of ascertaining whether they comply with the provisions of this code and the rules and regulations of the department of buildings.

46-17. A fee shall be charged for such annual inspection as follows: where the seating capacity is five thousand or less, twelve dollars; where the seating capacity is more than five thousand, thirty dollars. [Amend. Coun. J. 11-18-47, p. 1191.]

Billboards, Signs, and Signboards

46-18. It shall be the duty of the commissioner of buildings to exercise supervision over all billboards and signboards, other than signs and signboards covered by the provisions of chapter 86.1 of this code, erected or being maintained under the building provisions of this code, and to cause inspection by inspectors in his department of all such billboards and signboards to be made once each year and oftener where the condition of such boards so requires. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

46-19. Whenever it shall appear to the said commissioner that any such billboard or signboard has been erected in violation of the building provisions of this code or is in an unsafe condition or has become unstable or insecure, or is in such a condition as to be a menace to the safety or health of the public, he shall thereupon issue, or cause to be issued, a notice in writing to the owner of such billboard or signboard, or person in charge, possession, or control thereof, if the whereabouts of such person is known, informing such person of the violation of the building provisions of this code and of the dangerous condition of such billboard or signboard, and directing him to make such alterations or repairs thereto, as shall be necessary or advisable to place such billboard or signboard in a safe, substantial, and secure condition, and to make the same comply with the requirements of the building provisions of this code within such reasonable time as may be stated in said notice, not exceeding thirty days. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

46-20. If the owner or person in charge, possession, or control of any billboard or signboard, when so notified, shall refuse, fail, or neglect to comply with and conform to the requirements of such notice, said billboard or signboard shall constitute a public nuisance and the said commissioner shall, upon the expiration of the time therein mentioned, abate said nuisance by tearing down, or causing to be torn down, such part of such billboard or signboard as is constructed and maintained in violation of the building provisions of this code, and shall charge the expense to the owner or person in possession, charge, or control of such billboard or signboard, and the same shall be recovered from such owner or person by appropriate legal proceedings. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

46-21. If the owner of such billboard or signboard, or the person in charge, possession, or control thereof cannot be found, or his whereabouts cannot be ascertained, the commissioner shall attach, or cause to be attached to said billboard or signboard, a notice of the same import as that required to be sent to the owner or person in charge, possession, or control thereof, where the owner is known; and if such billboard or signboard shall not have been made to conform to the building provisions of this code and placed in a secure, safe, and substantial condition, in accordance with the requirements of such notice, within thirty days after such notice shall have been attached to such billboard or signboard, it shall be the duty of the commissioner of buildings thereupon to cause such billboard or signboard or such portion thereof as is constructed and maintained in violation of the building provisions of this code to be torn down; provided, however, that nothing herein contained shall prevent the commissioner of buildings from adopting such precautionary measures as may be necessary or advisable in case of imminent danger in order to place such billboard or signboard in a safe condition, the expense of which shall be charged to and recovered from the owner of such billboard or signboard, or the person in charge, possession, or control thereof in any appropriate proceedings therefor. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

46-22. Every person constructing and erecting billboards or signboards shall file with the city clerk a bond, with securities to be approved by the commissioner of buildings, in the penal sum of twenty-five thousand dollars, conditioned that such person shall faithfully comply with all the provisions and requirements of this chapter with respect to the construction, alteration, location, and safety of billboards or signboards and for the payment of the inspection fees required by this chapter; and conditioned further to indemnify, save and

keep the city and its officials harmless from any claims, damages, liabilities, losses, actions, suits, or judgments which may be presented, sustained, brought, or obtained against the city or any of its officials because of the construction, maintenance, alteration, or removal of any of the said billboards or signboards, or by reason of any accidents caused by or resulting therefrom. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

46-23. The annual inspection fees for the inspection of billboards or signboards shall be as follows:

Up to 50 square feet\$1.00

50 to 375 square feet\$2.00

For each additional 375 square feet or fractional part thereof\$2.00 provided, however, that where such billboard or signboard does not exceed sixty-five square feet in area and is attached to the surface of a permanent building in accordance with the provisions of that part of chapter 61 dealing with billboards and signboards and is designed to give publicity to the business carried on within such building, such as the name and address of owner and the nature of business, but in no event to advertise any article manufactured by any other person, and no part of said sign is more than eighteen feet above the average inside grade at the front of the building, no fees for inspection shall be charged, but not more than one sign of sixty-five square feet shall be allowed for each twenty-five lineal feet of frontage, unless the fees for inspection are paid as herein provided; and provided further, that where such billboard or signboard does not exceed twenty square feet in area and is attached to the surface of a permanent building in accordance with the aforesaid provisions of chapter 61 and is designed to give publicity to some article sold on the premises, and no part of said sign is more than eighteen feet above the average inside grade at the front of the building, no fees for inspection shall be charged; and provided further, that where such billboard or signboard does not exceed twenty-four square feet in area, when attached to the front, sides, or rear walls of any building, so that the flat surface of the same is against the building, or when erected on the ground if not erected nearer than ten feet to any building, structure, other signboard or public sidewalk, which is used to advertise the sale or lease of the property upon which it shall be erected, no fees for inspection shall be charged. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

46-24. Any person owning, operating, maintaining, or in charge, possession, or control of any building, structure, billboard or signboard within the city, that shall neglect or refuse to comply with the building provisions of this code, or that erects, constructs, or maintains any billboard or signboard which does not comply with the building provisions of this code, in all cases where no specific penalty is fixed herein, shall be fined not less than twenty-five dollars nor more than two hundred dollars for each offense; and each day on which any such person shall permit or allow any billboard or signboard owned, operated, maintained, or controlled by him to be erected, constructed, or maintained in violation of any of the building provisions of this code shall constitute a separate and distinct offense. [Repealed. Coun. J. 1-10-47, p. 6863; Passed. 5-28-58, p. 7796.]

Illuminated Roof Signs

46-25. [Amend. Coun. J. 3-13-45, p. 3143; 4-23-45, p. 3357; repealed. 1-10-47, p. 6863.]

46-26. [Repealed. Coun. J. 1-10-47, p. 6863.]

46-27. [Repealed. Coun. J. 1-10-47, p. 6863.]

46-28. [Amend. Coun. J. 3-13-45, p. 3143; repealed. 1-10-47, p. 6863.]

46-29. [Amend. Coun. J. 3-13-45, p. 3143; repealed. 1-10-47, p. 6863.]

Canopies and Marquees

46-30. The commissioner of buildings shall make an annual inspection of canopies and marquees attached to buildings or other structures which shall extend into or over any public way or public place.

46-31. The annual inspection fee to be charged for the inspection of canopies and marquees shall be as follows: where the horizontal projection of the canopy or marquee does not exceed two hundred square feet in area, six dollars; and where the horizontal projection of the canopy or marquee exceeds two hundred square feet in area, nine dollars for the first two hundred square

feet, and two dollars and twenty-five cents additional for each additional fifty square feet in the area of such canopy or marquee. [Amend. Coun. J. 11-18-47, p. 1191; 11-30-53, p. 6100.]

Mechanical Refrigerating Systems

46-32. [Repealed. Coun. J. 11-18-47, p. 1192.]

46-33. [Repealed. Coun. J. 11-18-47, p. 1192.]

Revolving Doors

46-34. Every revolving door now in operation, or which may hereafter be installed, together with all the equipment and mechanism thereof, shall be inspected annually under the authority of the commissioner of buildings.

46-35. Whenever such inspection shows a revolving door to be in good working order and in compliance with this code, the commissioner of buildings shall issue, or cause to be issued, a certificate to that effect.

46-36. For each such inspection and certificate a fee of six dollars shall be charged. [Amend. Coun. J. 11-18-47, p. 1191; 11-30-53, p. 6100.]

Tanks for Flammable Liquids

46-37. [Repealed. Coun. J. 12-15-43, p. 983.]

46-38. [Repealed. Coun. J. 12-15-43, p. 983.]

46-39. [Repealed. Coun. J. 12-15-43, p. 983.]

Mechanical Ventilating Systems

46-40. Every mechanical ventilating system shall be inspected annually by the commissioner of buildings. [Amend. Coun. J. 1-8-45, p. 2818.]

46-41. The fee for such annual inspection shall be ninety cents per one thousand cubic feet of air per minute or fractional part thereof of air required by the building provisions of this code to be circulated for ventilating purposes, including the sum of mechanical supply and exhaust systems; provided, however, that no such charge shall be less than three dollars and seventy-five cents. [Amend. Coun. J. 4-23-45, p. 3357; 11-18-47, p. 1191; 11-30-53, p. 6100.]

Gas Holders

46-42. Every tank or gas holder containing more than twenty-five hundred cubic feet of explosion hazard gases within the city shall be inspected at least once every five years, as required by chapter 60 under the direction of a building inspector appointed by the commissioner of buildings. [Amend. Coun. J. 12-30-49, p. 5579; 1-20-50, p. 5758.]

46-43. For every such five year inspection, with a certificate of compliance, a fee of twelve dollars shall be charged for each tank or gas holder. [Amend. Coun. J. 11-18-47, p. 1191.]

Other Tanks

46-44. Every tank having a capacity of more than two hundred fifty gallons, and located above the roof or above the floors of any building, or on any other structure, except as provided by sections 46-37 to 46-39, 46-42 and 46-43, shall be inspected annually by the commissioner of buildings as provided by this chapter.

46-45. For every such annual inspection, it shall be the duty of the owner to pay an inspection fee of six dollars for each such tank; provided, however, that for any building required to be inspected annually, the inspection fee for such tank therein or thereon shall be computed as required by section 46-6 by floor area. [Amend. Coun. J. 11-18-47, p. 1191.]

46-46. [Repealed. Coun. J. 11-18-47, p. 1192.]

46-47. [Repealed. Coun. J. 11-18-47, p. 1192.]

Violation of Chapter Provisions

46-48. Any person violating, or resisting or opposing the enforcement of any of the provisions of this chapter, where no other penalty is provided, shall be fined not less than twenty-five dollars nor more than two hundred dollars for each offense. Each day such violation shall continue shall constitute a separate and distinct offense.

CHAPTER 47

DEFINITIONS

47-1. Purpose

47-1. For the purpose of this code, the following terms shall be construed as herein defined.

47-2. Definitions

47-2. Accepted engineering practice. Accepted engineering practice shall be the compliance with the building provisions of this code or, in the absence of such provisions, with the recognized standards of governmental bureaus or authoritative technical organizations.

Accessory use. A building or structure, the use of which is incidental to the main building or structure and is located on the same lot.

Addition. Any construction which increases the area or cubic content of a building or structure.

Aisles. A passageway between rows of seats, or between rows of seats and a wall in a place of assembly, or between desks, tables, counters or other materials, or between such articles or materials and a wall in other rooms or spaces.

Aisles, Longitudinal. In a place of assembly, an aisle approximately perpendicular to the rows of seats served thereby.

Aisles, Transverse. In a place of assembly, an aisle approximately parallel to the rows of seats.

Alcove. A recess adjoining and connecting with a larger room, with an unobstructed opening into such room complying with the requirements of section 66-4.

Alteration. Any change in the occupancy classification or any change or modification of construction or space arrangement in any existing building or structure not increasing the area or cubic content thereof. Any change which decreases the area or cubic content of a building.

Apartment building. A multiple dwelling or part thereof designed or used primarily for family unit occupancy and containing three or more family units.

Approved. The sanction and endorsement by the commissioner of buildings under the provisions of the code or the rules adopted thereunder.

Assembly Unit. For definition see section 48-4.

Assembly Unit, Large. For definition see section 48-4.1.

Assembly Unit, Small. For definition see section 48-4.2.

Auxiliary use. For definition see section 48-12.2.

Balcony.

(a) An exterior auxiliary floor space projecting from the exterior wall of an enclosed structure and unenclosed by other than a railing or parapet.

(b) As applied to places of assembly, a seating level located above main floor of an auditorium.

Basement. A story of a building partly or wholly below grade.

Boarding house. For definition see "Hotel".

Building. A structure, or part thereof, enclosing any occupancy including residential, institutional, assembly, business, mercantile, industrial, storage, hazardous and miscellaneous uses. When separated by fire walls, each unit so separated shall be deemed a separate building.

Building, Accessory. A Miscellaneous Use Unit located on the same lot and incidental to a main or principal occupancy.

Building, Existing. For definition see chapter 78.

Business Unit. For definition see section 48-6.

Carbarn. For definition see section 61-10.1.

Chimney. For definition see section 63-1.1 (a).

Classroom. A room in a school used for the instruction of students in a group.

Coal pocket. For definition see section 61-4.1.

Combustible frame construction. For definition see section 49-5.

Combustible material. For definition see section 65-2 (a).

Controlled materials. For definition see section 69-3.1.

Cooling tower. For definition see section 61-13.1.

Court. For definition see section 66-1.1 (b).

Court, Inner. For definition see section 66-1.1 (e).

Court, Outer. For definition see section 66-1.1 (d).

Court, Through. For definition see section 66-1.1 (e).

Door, Fire. A door and its assembly, so constructed and assembled in places as to give specified protection against the passage of fire. See "Opening protective assemblies—Doors."

Dressing room. For definition see section 54-6.1 (f).

Driveway. For definition see section 59-3.1 (d).

Dry cleaning or dyeing units. For definition see chapter 60.

Dwelling unit. A room or suite of rooms designed or used for living purposes including a family unit or a room for sleeping accommodations, including hotel and dormitory rooms.

Elevator. For definition see section 79-2.

Equipment. Consists of all mechanical, electrical or storage devices and fixtures requiring conformance with the code in regard to construction, installation, operation, alteration, maintenance and inspection. Shall include among others elevators, plumbing, ventilation systems, heating apparatus, refrigeration systems, boilers and electrical equipment.

Escalator. For definition see section 79-2.

Exit. For definition see section 67-2 (a).

Exit, Horizontal. For definition see section 67-2 (c).

Exit, Outside. For definition see section 67-2 (d).

Exit, Vertical. For definition see section 67-2 (b).

Exit connection. For definition see section 67-2 (e).

Exterior protected construction. For definition see section 49-4.

Exterior trim. For definition see section 62-7.1.

Family unit. A room or group of rooms designed or used as a housekeeping unit for a family or for a group of not more than ten persons other than a family and providing living, sleeping, eating, cooking, and sanitation facilities complying with the requirements of this code.

Fence. For definition see section 61-5.1.

Finish, Ceiling. For definition see section 62-9.1.

Finish, interior wall. For definition see section 62-9.1.

Fire district. An area in the city within boundaries within which certain occupancies and types of construction may be limited or prohibited.

Fire escape. An exterior vertical exit used primarily as an emergency means of egress.

Fire resistance. For definition see section 65-2 (b).

Fire-resistive construction. For definition see section 49-2.

Fire-resistive rating. For definition see section 65-2 (c).

Fire station. For definition see section 61-6.1.

Flame-spread rating. For definition see section 65-2 (d).

Flight. For definition see section 67-2 (f).

Floor area.

1. As applied to area limitations: the floor space enclosed by exterior walls, fire-walls or a combination of these structural elements.

2. As applied to the capacity of a building or floor of a building: the floor space enclosed by the exterior walls of a building, excluding elevators, stairways or other shafts.

3. As applied to a space or room: the net area within the enclosing walls or partitions.

Fume hazard unit. For definition see chapter 60.

Flue. For definition see section 63-1.1 (e).

Foyer. A room adjoining an auditorium and serving as the principal entrance to any seating level thereof.

Gallery. For definition see "Balcony".

Garage. For definition see sections 48-9.3 and 59-3.1 (a).

Garage, Basement. For definition see section 59-3.1 (b).

Garage, Private. For definition see section 61-8.1.

Gasoline filling station. For definition see section 61-15.1.

Grade.

1. As applied to a building less than ten feet from a street property line, grade shall be the established sidewalk elevation.

2. As applied to a building more than ten feet from a street property line, grade shall be the finished ground elevation at the building wall.

3. As applied to a building facing a two-level street, grade shall be determined by the upper level unless otherwise provided.

Habitable room. A room in a Residential Unit used for living, sleeping, eating or cooking purposes, but excluding baths, toilet rooms, storage spaces and corridors.

Hangar. For definition see section 59-4.1 (a).

Hazardous Use Unit. For definition see section 48-10.

Heavy timber construction. For definition see section 49-4.1.

Height. For definition see section 51-1.1 (c).

Home for the aged. For definition see section 136-1.

Hotel. A building, or part thereof, designed or used primarily for sleeping accommodations for more than ten guests or lodgers.

Industrial Unit. For definition see section 48-8.

Industrial Unit, Low Hazard. For definition see section 48-8.1.

Industrial Unit, Moderate Hazard. For definition see section 48-8.2.

Institutional home. A building or part thereof designed or used for the housing and care of three or more aged or infirm persons or children and not providing hospital facilities.

Institutional Unit. For definition see section 48-3.

Interior trim. For definition see section 62-9.2.

Landing. For definition see section 67-2 (g).

Lintel. The beam or girder placed over an opening in a wall, which supports the wall construction above.

Loading space. For definition see section 59-3.1 (d).

Lodging house. For definition see "Hotel".

Lot. A parcel of land used or intended to be used as a unit. Each building and its accessory building, shall be on a separate lot.

Lot, Front of. The shortest street frontage.

Lot, Rear of. The boundary opposite the front of the lot as herein defined, or that boundary most nearly parallel to the front of the lot.

Lot line, Exterior. A boundary line between a lot and a street, alley, public way or railroad right of way.

Lot line, Interior. A boundary line between a lot and an adjoining lot.

Mercantile Unit. For definition see section 48-7.

Mezzanine. An intermediate floor placed in any story of a building and limited in area as required elsewhere in this code.

Miscellaneous Units. For definition see section 48-11.

Mixed occupancy. For definition see section 48-12.1.

Motor vehicle sales and display rooms. For definition see section 59-3.1 (c).

Multiple dwelling. For definition see section 48-2.2.

Newel post. For definition see section 67-2 (h).

Non-combustible construction. For definition see section 49-3.

Non-combustible material. For definition see section 65-2 (e).

Nursery, Day. An institution providing care for three or more children under the age of four years for periods of more than four hours but not exceeding twenty-four hours.

Nursery school. A school providing day care service for children from four to six years of age.

Nursing home. For definition see section 136-1.

Occupancy. The use or uses of any building or structure for any of the following purposes: residential, institutional, assembly, business, mercantile, industrial, storage, hazardous or miscellaneous uses as defined in chapter 48.

Occupancy content. The maximum number of persons occupying any building, floor, room or space.

Open air assembly unit. For definition see section 48-5.

Open space. A street, alley, waterway, park, yard, court or other permanent unobstructed space open to the sky.

Opening protective assemblies—Doors and shutters. For definition see section 65-5.1.

Opening protective assemblies—Windows. For definition see section 65-6.1.

Ordinary construction. For definition see section 49-4.2.

Parked vehicle. Any vehicle which is not in motion and which is not under control of the driver.

Partition. A vertical separating construction between rooms or spaces.

Partition, Bearing. A partition used to support loads other than its own weight.

Penthouse. For definition see section 62-11.2 (a).

Permit. An authorization by the commissioner of buildings to proceed with construction, alteration, installation or demolition.

Planning requirements. The size, arrangement and location of the rooms within a structure.

Prefabricated assembly. For definition see section 69-6 (a).

Professional services. Professional services shall include medical, dental, legal, architectural, engineering and similar services.

Projection block. For definition see section 54-6.1 (e).

Property room. For definition see section 54-6.1 (h).

Proscenium. For definition see section 54-6.1 (g).

Public way. A public street, alley, sidewalk or park.

Radio theater. A radio studio with an assembly space for an audience of more than 100 persons.

Ramp. For definition see section 67-2 (i).

Residential Unit. For definition see section 48-2.

Riser. For definition see section 67-2 (j).

Rooming house. For definition see "Hotel".

Roundhouse. For definition see section 61-9.1.

Row of seats. A group of adjoining seats arranged side by side.

School. For definition see section 48-4.3.

Shaft. A space enclosed with side walls and extending through two or more stories.

Shall. As used in this code means mandatory.

Sheltered care home. For definition see section 136-1.

- Sign, Outdoor.* For definition see section 61-2.1 (a).
- Single-family dwelling.* For definition see section 48-2.1.
- Sleeping accommodations.* A room, space, or portion thereof, used primarily for sleeping purposes.
- Smokeproof tower.* For definition see section 67-11.
- Stage.* For definition see section 54-6.1 (a).
- Stage block.* For definition see section 54-6.1 (d).
- Stage, Type 1.* For definition see section 54-6.1 (b).
- Stage, Type 2.* For definition see section 54-6.1 (c).
- Stage workshop.* For definition see section 54-6.1 (i).
- Stairway.* For definition see section 67-2 (k).
- Stairway, Enclosed.* For definition see section 67-2 (k) (1).
- Stairway, Exterior.* For definition see section 67-2 (k) (2).
- Stairway, Interior.* For definition see section 67-2 (k) (3).
- Storage room.* For definition see section 54-6.1 (j).
- Storage Unit.* For definition see section 48-9.
- Storage Unit, Low Hazard.* For definition see section 48-9.1.
- Storage Unit, Moderate Hazard.* For definition see section 48-9.2.
- Story.* The space between any two floors or between the topmost floor and the ceiling.
- Tent.* For definition see section 61-14.1.
- Theater.* An Assembly Unit designed or used primarily for theatrical or motion picture performances and containing a Type 1 stage or a projection block.
- Tourist house.* For definition see "Hotel".
- Tower.* For definition see section 62-11.4.
- Travel distance.* For definition see section 67-6.1.
- Tread.* For definition see section 67-2 (l).
- Vent pipe.* For definition see section 63-1.1 (g).
- Wall, Bearing.* A wall used to support loads other than its own weight.
- Wall, Fire.* For definition see section 62-1.1.
- Wall, Non-bearing.* A wall used to support no loads other than its own.
- Wall, Parapet.* The extension of a wall above the roof level.
- Wall, Retaining.* A wall designed to resist lateral earth pressure.
- Window, Fire.* A window and its assembly, so constructed and assembled in place as to give specified protection against the passage of fire. See "Opening protective assemblies—Windows".
- [Amend. Coun. J. 3-14-57, p. 4430; 7-9-58, p. 8000.]

CHAPTER 48

CLASSIFICATION OF BUILDINGS BY OCCUPANCY

- 48- 1. Classification by occupancy
- 48- 2. Class A, residential units
- 48- 2.1. Class A-1, single-family dwellings
- 48- 2.2. Class A-2, multiple dwellings
- 48- 3. Class B, institutional units
- 48- 4. Class C, assembly units
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- 48- 5. Class D, open air assembly units
- 48- 6. Class E, business units
- 48- 7. Class F, mercantile units
- 48- 8. Class G, industrial units
- 48- 8.1. Class G-1, low hazard industrial units
- 48- 8.2. Class G-2, moderate hazard industrial units
- 48- 9. Class H, storage units
- 48- 9.1. Class H-1, low hazard storage units
- 48- 9.2. Class H-2, moderate hazard storage units
- 48- 9.3. Class H-3, garages
- 48-10. Class I, hazardous use units
- 48-11. Class J, miscellaneous buildings and structures
- 48-12. Mixed occupancy
- 48-12.1. Definition
- 48-12.2. Auxiliary uses
- 48-12.3. General requirements
- 48-12.4. Height and area limitations
- 48-12.5. Required fire resistance for occupancy separation
- 48-12.6. Separation from public spaces below grade
- 48-13. Occupancy content
- 48-13.1. Assembly units and open air assembly units
- 48-13.2. Other occupancies

48-1. Every new or existing building or part thereof, shall for the purpose of this Code, be classified according to its use or occupancy in one of the following occupancy classes:

Class A, Residential Units.

Class A-1. Single-Family Dwellings.

Class A-2. Multiple Dwellings.

Class B, Institutional Units.

Class C, Assembly Units.

Class C-1. Large Assembly Units.

Class C-2. Small Assembly Units.

Class C-3. Schools.

Class D, Open Air Assembly Units.

Class E, Business Units.

Class F, Mercantile Units.

Class G, Industrial Units.

Class G-1. Low Hazard Industrial Units.

Class G-2. Moderate Hazard Industrial Units.

Class H, Storage Units.

Class H-1. Low Hazard Storage Units.

Class H-2. Moderate Hazard Storage Units.

Class H-3. Garages.

Class I, Hazardous Use Units.

Class J, Miscellaneous Buildings and Structures.

Each occupancy class shall include buildings or parts of buildings as herein-after defined and those of similar character or use. Whenever there is any uncertainty as to the classification of the building, the commissioner of buildings shall fix the classification within which it falls according to the relative fire hazard involved.

48-2. Buildings, or parts thereof, designed or used for one or more family units or designed or used for sleeping accommodations other than family units except institutional units as defined in section 48-3, shall be classified as Class A, Residential Units.

48-2.1. Residential Units designed or used for not more than one family unit, which may provide additional sleeping accommodations for not more than five lodgers or boarders or Residential Units designed or used for sleeping accommodations other than family units for not more than ten persons shall be classified as Class A-1, Single Family Dwellings.

48-2.2. Residential Units designed or used for two or more family units or designed or used for sleeping accommodations, other than family units, for more than ten persons shall be classified as Class A-2. Multiple Dwellings, shall include, among others, the following:

Apartment Buildings
Boarding Houses
Clubs
Convents
Dormitories
Fraternities

Hotels
Lodging Houses
Monasteries
Motels
Rooming Houses
Tourist Houses

[Amend. Coun. J. 5-28-58, p. 7794.]

48-3. Buildings, or parts thereof, designed or used for the harboring of three or more persons for medical, correctional, penal, or other care, treatment or detention shall be classified as Class B, Institutional Units. Class B, Institutional Units shall include, among others, the following:

Asylums
Homes for aged
Hospitals
Infirmaries
Jails

Nurseries
Nursing homes
Orphanages
Sanatoria
Sheltered care homes

[Amend. Coun. J. 7-9-58, p. 8000.]

48-4. Buildings, or parts thereof, designed or used for the assembly of persons for civic, political, educational, religious, social, recreational or other similar activities shall be classified as Class C, Assembly Units. Class C, Assembly Units shall include among others, the following:

Amphitheaters
Aquariums
Armories
Art galleries
Assembly halls
Auditoriums
Ballrooms
Banquet halls
Boards of trade
Bowling alleys
Churches
Community houses
Concert halls
Convention halls
Court rooms
Dance halls
Exhibition halls
Field houses

Funeral parlor
Gymnasiums
Lecture halls
Libraries
Motion picture theaters
Museums
Night clubs
Passenger stations
Planetariums
Radio Theaters
Recreation halls
Restaurants
Rinks
Schools
Stadiums (indoor)
Swimming pools (indoor)
Taverns
Theaters

[Amend. Coun. J. 11-7-58, p. 8380.]

48-4.1. Assembly Units having a capacity of 300 persons or more in one room or space, other than schools, shall be classified as Class C-1, Large Assembly Units.

48-4.2. Assembly Units, other than schools, having a capacity of less than 300 persons in any one room or space shall be classified as Class C-2, Small Assembly Units, with the following exceptions:

(a) Restaurants, bars, taverns and similar occupancies having a capacity of not more than 100 persons shall be classified as Class F, Mercantile Units.

(b) Other assembly occupancies having a capacity of not more than 100 persons and located in a building of another occupancy shall be classified according to that occupancy.

48-4.3. Assembly Units designed or used for educational or institutional purposes shall be classified as Class C-3, Schools. Every school shall be classified as follows:

Type 1 Schools: Type 1 schools shall include day nursery schools, kindergarten schools, elementary schools, high schools and other similar occupancies.

Type 2 Schools. Type 2 schools shall include colleges, schools for adult education, commercial and vocational schools and other similar occupancies.

48-5. Structures or enclosed areas designed or used for the assembly of persons in the open air, other than drive-in theaters as defined in section 55.1-1, shall be classified as Class D, Open Air Assembly Units. Class D, Open Air Assembly Units shall include, among others, the following:

Amusement parks
Athletic fields
Automotive speedways
Aviation fields
Band stands
Beach enclosures
Grand stands

Observation platforms
Outdoor swimming pools
Outdoor theaters, other than
drive-in theaters
Race tracks
Reviewing stands
Stadiums

[Amend. Coun. J. 5-3-50, p. 6213.]

48-6. Buildings, or parts thereof, designed or used for the transaction of business or for the rendering of professional service or for other services that do not involve the storage of stocks of goods, wares or merchandise, except such as are incidental for display purposes, shall be classified as Class E, Business Units. Class E, Business Units, shall include, among others, the following:

Administration buildings
Banks
Civic administration
Offices

Professional services
Radio stations
Telephone exchanges

48-7. Buildings, or parts thereof, designed or used for the sale of goods, wares and merchandise and involving only incidental storage of such materials shall be classified as Class F, Mercantile Units. Class F, Mercantile Units, shall include, among others, the following:

Markets
Retail stores
Sales rooms

Shops
Specialty shops
Wholesale stores

Restaurants, bars, taverns and similar occupancies having a capacity of not more than 100 persons shall be classified as Class F, Mercantile Units.

48-8. Buildings, or parts thereof, used primarily for manufacturing or in which five or more persons are engaged in fabricating, assembling, or processing of products or materials, except hazardous uses as defined under Class I of this Code, shall be classified as Class G, Industrial Units. Class G, Industrial Units, shall include, among others, the following:

Assembly plants
Bakeries
Boiler works
Breweries
Canneries
Ice plants
Manufacturing plants

Mills
Packing houses
Power plants
Processing plants
Pumping plants
Shops for Diesel locomotives
Workshops

48-8.1. Industrial units designed or used for the manufacturing of generally non-combustible products shall, upon evidence in writing satisfactory to the commissioner of buildings, be classified as Class G-1, Low Hazard Industrial Units. Low Hazard Industrial Units shall include power plants, pumping plants, ice plants and plants for the manufacture and processing of asbestos, clay products, chalk and crayons, glass, ivory, metals, porcelain and pottery, stone and other materials of similar hazard classification.

48-8.2. Industrial units other than Low Hazard Industrial Units as defined in section 48-8.1 shall be classified as Class G-2, Moderate Hazard Industrial Units.

48-9. Buildings, or parts thereof, used primarily for the storage of goods, wares or merchandise, except those defined in this code under Class I, Hazardous Use Units, and in which less than five persons are engaged in manufacturing or processing of products or materials shall be classified as Class H, Storage Units. Class H, Storage Units, shall include, among others the following:

Cold storage buildings
Freight depots
Garages
Hangars

Live stock shelters
Storage buildings
Warehouses

48-9.1. Storage units designed or used for generally non-combustible goods shall, upon evidence in writing satisfactory to the commissioner of buildings, be classified as Class H-1, Low Hazard Storage Units. Low Hazard Storage Units shall include buildings used for the storage of asbestos, clay products, chalk, glass, ivory, metals, porcelain or pottery, stone, and materials of similar hazard classification.

48-9.2. Storage Units other than Class H-1, Low Hazard Storage Units, and Class H-3, Garages, shall be classified as Class H-2, Moderate Hazard Storage Units.

48-9.3. Buildings, or parts thereof, designed or used for the shelter, storage or servicing of motor vehicles containing flammable fuel shall be classified as H-3, Garages, except parking facilities as defined in section 61-20.1 which shall be classified as Class J. miscellaneous buildings and structures. [Amend. Coun. J. 3-14-57, p. 4430; 5-28-58, p. 7797.]

48-10. Buildings, or parts thereof, used for the manufacturing, processing, storage or use of materials of the following general classifications shall be classified as Class I, Hazardous Use Units:

(a) Highly combustible, inflammable or explosive products or materials which are likely to burn with extreme rapidity or from which poisonous fumes or explosions may result in the event of fire.

(b) Highly corrosive, toxic or noxious alkalies, acids or other liquids.

(c) Fume hazardous, explosive, poisonous, irritant or corrosive gases.

(d) Materials involving explosive mixtures of dust or which result in the division of matter into fine particles subject to spontaneous combustion.

(e) Chemicals or synthetic paints or enamels involving flame, fume or explosive hazard.

(f) Other hazardous uses as defined in chapter 60.

48-11. Miscellaneous structures and structures of a temporary character shall be constructed and equipped to meet the requirements of the code commensurate with the fire and life hazard incidental to their use; and where not specifically herein provided for, the commissioner of buildings shall adopt rules and regulations to fix the character of construction in relation to fire districts and proximity to adjacent structures. Class J, Miscellaneous Buildings and Structures, shall include, among others, the following:

Bridges	Retaining walls
Carbarns	Roundhouses
Coal pockets	Signs
Fences	Sheds
Fire stations	Stables
Gasoline filling stations	Tanks
Greenhouses	Temporary buildings
Lumber yards	Tents
Parking facilities	Transformer vaults
Police stations	Trestles
Poles and flag poles	Water, transmission and radio towers
Private garages	

[Amend. Coun. J. 5-28-58, p. 7797.]

48-12. Buildings or structures hereafter designed or used for mixed occupancy shall comply with the requirements of sections 48-12.1 to 48-12.5, inclusive.

48-12.1. A building designed or used for two or more occupancies, representing different occupancy classifications, except in the case of auxiliary uses as described in section 48-12.2, shall be classified as a mixed occupancy.

48-12.2. Rooms and spaces normally provided and incidental to the principal use of a building and under the same management and control shall be classified as auxiliary uses and shall not be considered as constituting a mixed occupancy.

Auxiliary uses shall not introduce any unusual hazard or danger unless in the judgment of the commissioner of buildings such auxiliary use is indispensable to the principal use.

Auxiliary uses shall be limited to a maximum of five per cent of the area occupied by the principal use, provided however, that the commissioner of buildings and the division marshal in charge of the bureau of fire prevention may jointly approve auxiliary uses exceeding said five per cent of the area of the principal use when in their opinion such auxiliary uses do not unduly increase the hazards.

Loading spaces and appurtenant driveways extending more than five feet into a building or structure when used by vehicles with internal combustion engines on any street level floor within industrial units and storage units one story in height, shall be limited to 20% of the floor area of the principal use, and shall be separated from the principal use by a loading platform, curb, railing or other fixed barricade. The vehicles with internal combustion engines using such loading spaces and appurtenant driveways shall not remain inside the building for a longer period than necessary for loading or unloading and while inside the building shall at all times be under control of the driver.

Spaces classified as auxiliary uses shall comply with the applicable requirements of this code pertaining to the specific use but not require the special separations as established in section 48-12.5 and shall not govern height or area limitations as established for the principal occupancy of the building.
[Amend. Coun. J. 1-20-50, p. 5758; 11-7-58, p. 8380.]

48-12.3. When a building is occupied by two or more occupancies not included in one classification, the provisions of this code applying to each use shall apply to such parts of the building as come within that classification.

48-12.4. Height and area limitations in buildings of mixed occupancy shall comply with the requirements of section 51-3.

48-12.5. Each occupancy in a building of mixed occupancy shall be wholly separated horizontally and vertically from any adjoining occupancy by construction materials providing fire resistance as established in Table 48-12.5.

TABLE 48-12.5. REQUIRED SEPARATIONS IN BUILDINGS OF MIXED OCCUPANCY
Fire Resistive Ratings in Hours

Occupancy Classification	A	B	C-1	C-2	C-3	D	E	F	G	H-1 H-2	H-3	I
A. Residential		3	4	2	4	4	1	1	4	4	4	(b)
B. Institutional	3		4	4	3	4	4	4(c)	(b)	(b)	(b)	(b)
C-1. Large Assembly	4	4		4	4	4	4	4	4(c)	4(c)	4(c)	(b)
C-2. Small Assembly	2	4	4		4	2	2	2	4	4	4	(b)
C-3. Schools	4	3	4	4	(e)	4	2	4	4(c)	4(c)	4(c)	(b)
D. Open Air Assembly	4	4	4	2	4		4	4	4	4	4	(b)
E. Business	1	4	4	2	2	4		(a)	(a)	(a)	3	4
F. Mercantile	1	4(c)	4	2	4	4	(a)		3	(a)	3	(b)
G. Industrial	4	(b)	4(c)	4	4(c)	4	(a)	3		(a)	4	4
H-1 & H-2. Storage	4	(b)	4(c)	4	4(c)	4	(a)	(a)	(a)		4	4
H-3. Garages	4	(b)	4(c)	4	4(c)	4	2	3	4	4		4
I. Hazardous Use		(b)	(b)	(b)	(b)	(b)	4		(b)	4	4	4

(a) No special separation required

(b) Mixed Occupancy not permitted

(c) Unpierced separations

(e) For trade or technical schools, shop portions of schools may be built to comply with requirements for industrial buildings, but shall have four-hour fire separations with double Class A fire doors between shop portions and academic portions of buildings.

[Amend. Coun. J. 6-2-54, p. 7639.]

48-12.6. (a) The interior of any building which adjoins a subway or other public space below grade not open to the sky, shall be separated from subway or other public space by walls or floors of solid masonry or reinforced concrete, or equal with a fire resistive rating of not less than 4 hours.

(b) Every opening through a wall, required by this section to be used as an exit, shall be protected by a labeled outswinging Class A fire door. Such doors shall be equipped with approved panic hardware and may be single or pairs. Every other opening through such wall, not required as an exit shall be protected with a Class A fire door.

(c) No wall used in a separation required by this section shall be located more than twenty feet back from the subway or other public space. Show windows and display spaces may be located on the public side of such separating wall, but there shall not be more than one door opening into each show window or display space.

(d) Nothing in this section shall be construed to prevent the entire space under any building or any portion of such space, or any passage through a building from being used as a right-of-way or switching space for railroads or public carriers; provided, however, that such spaces or passages shall not be designed or used as a public thoroughfare nor as a parking space for motor vehicles where such use is prohibited by other sections of this code; and provided further, that such space is separated from the interior and adjacent parts of the building as required by this section for subways. [Passed. Coun. J. 3-14-57, p. 4430.]

48-13. When the requirements of this code are related to the maximum number of persons occupying a space or building such occupancy content shall be determined as provided in sections 48-13.1 and 48-13.2.

48-13.1. Assembly Units and Open Air Assembly Units, the occupancy content shall be based on the capacity of the rooms or spaces used for assembly purposes and shall be determined as follows:

(a) In rooms or spaces with fixed seating, the occupancy content shall be the actual number of seats provided. When no divisions between seats are provided, fixed seating shall be computed at eighteen inches per person.

(b) In rooms or spaces without fixed seating, the occupancy content shall be determined by the dividing of the net floor area (excluding the areas occupied by elevators, toilet rooms, stairways, other shaft enclosures, and

CLASSIFICATION OF BUILDINGS BY OCCUPANCY

by permanent fixtures such as bowling alleys, bars, cigar counters, exit facilities, entrance vestibules, lunch counters and serving spaces for same, etc.) by the floor area per person established in the following table:

<i>Occupancy</i>	<i>Floor Area per Person</i>
(1) School class rooms and recreation rooms.....	20 sq. ft.
(2) School laboratories and shops.....	30 sq. ft.
(3) Museums, libraries and similar uses.....	20 sq. ft.
(4) Restaurants	15 sq. ft.
(5) Other assembly uses	6 sq. ft.

[Amend. Coun. J. 3-14-57, p. 4430.]

48-13.2. In occupancies, other than Assembly Units, the occupancy content shall be determined by dividing the net floor area within the perimeter of the space or building not including elevators, stairways, or other shaft enclosures by the floor area per person established in the following table.

<i>Occupancy</i>	<i>Floor Area per Person</i>
Residential Units	125 sq. ft.
Institutional Units	150 sq. ft.

Except nursing homes, sheltered care homes and homes for the aged: The occupancy content for these institutional units shall be determined in accordance with the following:

- (1) The minimum area of a single bedroom or sleeping room shall be not less than eighty square feet, not including space taken up by closets, for each patient's bed.
- (2) Each multiple bedroom shall have at least sixty square feet of floor area, not including any space taken up by closets, for each patient's bed.

Business Units	100 sq. ft.
Mercantile Units	
First floor	30 sq. ft.
Basement sales floor	30 sq. ft.
Other floors	60 sq. ft.
Industrial Units	
Power plants	400 sq. ft.
Other industrial units	100 sq. ft.
Storage Units	300 sq. ft.

[Amend. Coun. J. 7-9-58, p. 8000.]

CHAPTER 49

CLASSIFICATION OF BUILDINGS BY CONSTRUCTION TYPE

- | | |
|--|---|
| 49- 1. Construction types | 49- 7. Fire-resistive values |
| 49- 2. Type I, fire-resistive construction | 49- 8. Fire-resistive requirements of types of construction |
| 49- 3. Type II, non-combustible construction | 49- 9. Exceptions to fire protection |
| 49- 4. Type III, exterior protected construction | 49- 9.1. Supporting members |
| 49- 4.1. Type III-A, heavy timber construction | 49- 9.2. Elevator framing |
| 49- 4.2. Type III-B, and Type III-C, ordinary construction | 49- 9.3. Lintels |
| 49- 5. Type IV, combustible frame construction | 49- 9.4. Shelf angles |
| 49- 6. Mixed types of construction | 49- 9.5. Mezzanine floors |
| | 49-10. Basement construction |
| | 49-10.1. Columns and bearing walls |
| | 49-10.2. Sub-basements |
| | 49-10.3. Floor construction |
| | 49-11. Driveways and loading spaces |

49-1. All buildings shall be classified under four general types, according to the character of materials employed, their method of assembly, and the fire resistance which they afford as follows:

Type I —Fire-Resistive Construction.

Type 1-A.

Type 1-B.

Type 1-C.

Type II —Non-Combustible Construction.

Type III—Exterior Protected Construction.

Type III-A—Heavy Timber.

Type III-B—Ordinary.

Type III-C—Ordinary.

Type IV—Combustible Frame Construction.

Type IV-A.

Type IV-B.

49-2. Type I, Fire-Resistive Construction, shall include Types I-A, I-B and I-C and shall be that construction in which all structural elements, including walls, bearing partitions, floors, ceilings, roofs and their supports, are of non-combustible materials, providing fire resistance as required in section 49-8.

Subject to the provisions of chapter 62, combustible material may be used in buildings of fire-resistive construction for the following purposes:

- (a) Doors, door frames and bucks.
- (b) Windows and window frames.
- (c) Interior trim, including grounds and furring.
- (d) Finished flooring and sleepers.
- (e) Frames, platforms and aprons of exterior show windows at street level.
- (f) Handrails.
- (g) Interior wall and ceiling finishes.
- (h) Roof insulation.

[Amend. Coun. J. 1-20-50, p. 5758.]

49-3. Type II, Non-Combustible Construction, shall be that construction in which all structural elements, including walls, bearing partitions, floors, ceilings, roofs and their supports, are of non-combustible materials but which are generally not fire protected except as required in section 49-8.

Subject to the provisions of chapter 62, combustible material may be used in buildings of non-combustible construction for the following purposes:

CLASSIFICATION OF BUILDINGS BY CONSTRUCTION TYPE

- (a) Doors, door frames and bucks.
- (b) Windows and window frames.
- (c) Interior trim, including grounds and furring.
- (d) Finished flooring and sleepers.
- (e) Frames, platforms and aprons of exterior show windows, at street level.
- (f) Handrails.
- (g) Interior wall and ceiling finishes.
- (h) Roof insulation.

[Amend. Coun. J. 1-20-50, p. 5758.]

49-4. Type III, Exterior Protected Construction, shall include Types III-A, III-B and III-C and shall be that construction in which all exterior walls are of non-combustible materials providing fire resistance not less than required by section 49-8. The structural elements of the interior framing shall be as required in sections 49-4.1 and 49-4.2.

49-4.1. Type III-A, Heavy Timber Construction, shall have interior structural elements of heavy timber material as required in this section.

(a) Wood members of heavy timber construction shall be arranged so that there will be no concealed spaces within the construction.

(b) Columns shall have a minimum dimension of eight inches.

(c) Floor framing members shall have minimum nominal dimensions of six by ten inches.

(d) Roof framing members, except trusses, shall have a minimum nominal dimension of six inches.

(e) The members of roof trusses shall have minimum nominal dimensions of four inches by six inches with the following exceptions:

(1) Members may consist of two or more pieces of three-inch nominal thickness with intervening spaces blocked solidly or tightly closed by a continuous wood cover plate of not less than two-inch nominal thickness.

(2) Any member may be reduced to three-inch nominal thickness when protected by an approved automatic sprinkler system under the roof deck.

(f) Wood floors shall be splined or tongue and grooved planks of not less than three-inch nominal thickness or of laminated planking laid on edge of not less than four-inch nominal thickness. A top flooring of not less than one inch nominal thickness shall be added to the structural floor.

(g) Roof construction shall be of construction not less fire resistive than splined or tongue and grooved planks of not less than two-inch nominal thickness or laminated planking laid on edge of not less than three-inch nominal thickness.

(h) Construction conforming to the requirements of Type I construction may be used.

[Amend. Coun. J. 3-14-57, p. 4430.]

49-4.2. Type III-B and Type III-C, Ordinary Construction, shall be that construction other than heavy timber construction in which the structural elements of the interior framing are entirely or in part of wood or other materials not more combustible than wood.

49-5. Type IV-A and Type IV-B, Combustible Frame Construction shall be that construction in which the structural elements, including enclosing walls, are entirely or in part of wood or other materials not more combustible than wood.

49-6. When two or more types of construction occur in the same building, the provisions of this code applying to each type of construction shall be complied with.

49-7. The degree of fire resistance of materials, assemblies and construction shall be measured in terms of the number of hours of satisfactory performance as determined by the requirements of section 65-4.

49-8. The fire resistive values required for the various elements for each type of construction shall be as established in Table 49-8 and section 49-9.

TABLE 49-8. REQUIRED HOURS OF FIRE RESISTANCE FOR TYPES OF CONSTRUCTION

Description	Type I Fire-Resistive			Type II Non- Combustible	Type III Exterior Protected			Type IV Combustible Frame	
	Type I-A	Type I-B	Type I-C		Heavy Timber	Ordinary		Type IV-A	Type IV-B
					Type III-A	Type III-B	Type III-C		
1. Exterior Bearing Walls	4 (d)	3 (d)	2	N.C.	4 (d)	3 (d)	3 (d)	1	½ (e)
2. Exterior Non-Bearing Wall									
Outside Exposure	2 (d)	2 (d)	2 (d)	N.C.	2 (d)	2 (d)	2 (d)	1	
Inside Exposure (a)	4	3	2	N.C.	2	2	2	1	½ (e)
Inside Exposure (b)	3	2	2	N.C.	2	2	2	1	½ (e)
Inside Exposure (c)	2	2	1	N.C.	1	1	1	1	½ (e)
3. Interior Bearing Walls	4	3	2	N.C.	3	1 (j)	½ (e)	1	½ (e)
4. Interior Non-Bearing Walls & Partitions	(g)	(g)	(g)	(g)	(g)	(g)	½ (e)	(g)	½ (e) (l)
5. Exterior Columns	4	3	2	N.C.	4	2	2	1	½ (e)
6. Interior Columns									
Supporting Roofs Only	3	2	1	N.C.	(h)	½ (f)	½ (f)	½ (f)	½ (f)
Other Columns	4	3	2	N.C.	(h)	1	½ (e)	1	½ (e)
7. Beams, Girders & Trusses									
Supporting Roofs Only	2 (k)	2 (k)	1 (k)	N.C.	(h)	½ (f)	½ (f)	½ (f)	½ (f)
Other Beams, Girders & Trusses	3	2	1	N.C.	(h)	1	½ (e)	1	½ (e)
8. Floor Construction	3	2	1	N.C.	(h)	1	½ (e)	1	½ (e)
9. Roof Construction	2 (k)	2 (k)	1 (k)	N.C.	(h)	½ (f)	½ (f)	½ (f)	½ (f) (l)

Notes Pertaining to Table 49-8

N.C.—Non-Combustible.

(a) Storage, Industrial and Hazardous occupancies.

(b) Business and Mercantile occupancies.

(c) Residential, Institutional and Assembly occupancies.

(d) When exterior walls face a street, public open space, yard or court not less than thirty feet in width, such walls may be of non-combustible materials providing fire resistance from outside exposure as follows:

(1) Exterior bearing walls of buildings of Types I-A and III-A construction—3 hours.

(2) Exterior bearing walls of buildings of Types I-B, III-B and III-C construction—2 hours.

(3) Exterior non-bearing walls of buildings of Types I-A, I B, I-C, III-A, III-B and III-C construction—1 hour.

(e) Fire resistive protection shall be required in all buildings except in one-story industrial and storage units, private garages and the various buildings and structures listed in sections 50-3.1 and 50-4.1. For single family residential units, interior facings on wood framings of exterior walls, or ceilings under non-habitable spaces, shall be of material providing not less than fifteen minutes' protection.

(f) Fire protection of roof construction and columns supporting such roof construction only shall not be required in one-story buildings of Assembly, Business, Mercantile, Industrial and Storage occupancies except as provided in section 54-6.7.

(g) See sections 62-3 to 62-6, inclusive.

(h) See section 49-4.1.

(j) The use of combustible construction other than heavy timber construction for load-bearing walls or load-bearing partitions shall be limited to the support of not more than two floors and a roof.

(k) Fire protection shall not be required for construction located at a distance of twenty feet or more above any floor, mezzanine or balcony. One hour construction only shall be required for construction located fourteen feet or more above any floor, mezzanine or balcony.

(l) In single family residential units not over one story high, having a floor area not exceeding 1000 square feet, non-bearing partitions may be of such materials as will have a fire resistance rating not less than a wood stud partition covered on both sides with one-half inch exterior grade plywood which will have a flame spread rating of not to exceed 30, and which will withstand an impact equivalent to 60 pounds at 3½ feet. Ceiling material may be similar, with a fire resistance rating equivalent to such covering on one side of said studs. [Amend. Coun. J. 1-20-50, p. 5758.]

49-9. Fire protection requirements as established in section 49-8 shall be under the conditions provided in sections 49-9.1 to 49-9.5, inclusive.

49-9.1. The fire-resistive value of any structural member shall be not less than the required fire-resistive rating of construction supported by such member.

49-9.2. Structural members or frames for elevators, located wholly within elevator shaft enclosures or in penthouses, shall not be required to be fire protected.

49-9.3. Lintels over masonry wall openings not exceeding five feet in clear width shall not be required to be fire protected.

49-9.4. Members, supporting wall facing which is not more than four and one-half inches in thickness and securely anchored or bonded to backing, shall not be required to be fire protected, provided that such members are properly supported by spandrel beams or lintels which are fire protected as required in section 49-8.

49-9.5. In buildings of business, mercantile, industrial and storage occupancies, mezzanine floors and the supports thereof of non-combustible materials shall not be required to be fire protected, provided that the aggregate area of such mezzanines shall not exceed ten per cent of the floor area in the first story nor five per cent of the floor area in any other story.

49-10. Basement construction shall comply with the special fire resistive requirements of sections 49-10.1 to 49-10.3, inclusive.

49-10.1. In all buildings more than two stories and attic in height of Types III-B, III-C, and IV-A construction, all basement columns and basement bearing walls shall be of non-combustible materials or of heavy timber construction.

49-10.2. When more than one basement story is provided, the floor construction separating the basements from the first floor and all construction below that level shall be of Type I-A construction.

49-10.3. (a) Except in Single Family and Two Family Dwellings, floor construction over basements shall provide fire resistance of not less than one hour.

(b) In buildings of Types III-B, III-C, IV-A and IV-B construction, fire protection shall not be required for floor construction over unexcavated spaces below the first floor, nor for floor construction over basements in single family dwellings. [Amend. Coun. J. 9-20-50, p. 6925.]

49-11. Driveways and loading spaces extending into a building and complying with the requirements of an auxiliary use under the provisions of section 48-12.2 shall be enclosed as follows:

(a) Except in buildings of Industrial or Storage occupancy, the floors of such spaces and the floor construction separating such spaces from a floor above shall be of construction providing fire resistance of not less than three hours. The walls of such spaces shall be of construction not less fire resistant than required for the exterior walls of the building.

(b) In buildings of Industrial and Storage occupancy, no enclosures shall be required, provided however that the floor below such spaces shall be of construction providing fire resistance of not less than three hours.

CHAPTER 50

LOCATION LIMITATIONS

- | | |
|--|--|
| <p>50-1. Fire districts</p> <p>50-2. Projections beyond main building walls</p> <p>50-2.1. Combustible frame construction</p> <p>50-2.2. Non-combustible construction</p> <p>50-2.3. Frontage requirement</p> <p>50-2.4. Zoning requirements</p> <p>50-3. Limitations in fire district No. 1</p> <p>50-3.1. Construction types</p> <p>50-3.2. Roof covering</p> <p>50-3.3. Hazardous use units</p> <p>50-4. Limitations in fire district No. 2</p> | <p>50-4.1. Construction types</p> <p>50-4.2. Roof coverings</p> <p>50-5. Limitations in fire district No. 3</p> <p>50-5.1. Construction types</p> <p>50-5.2. Roof coverings</p> <p>50-6. Changes to existing buildings in fire districts</p> <p>50-7. Buildings located in two districts</p> <p>50-8. Boundaries of fire districts</p> |
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50-1. Three fire districts are hereby established as follows:

- Fire District No. 1.
- Fire District No. 2.
- Fire District No. 3.

The boundaries of each fire district shall be as established in section 50-8.

Location on Property

50-2. Eaves, cornices, ornamental projections, chimneys, buttresses, etc., shall not project beyond main building walls more than one-third of the distance to interior lot lines. [Passed. Coun. J. 3-14-57, p. 4430.]

50-2.1. Buildings of Type IV-A and IV-B construction, when permitted, shall be located not less than six feet from interior lot lines and not less than twelve feet from any other building on the same lot with the following exceptions:

(a) Private garage having a floor area not exceeding five hundred square feet may be located not less than one foot from an interior lot line, excepting as required by zoning ordinance.

(b) Any building having exterior wall construction providing fire resistance of not less than one hour may be located not less than three feet from an interior lot line and not less than six feet from another building on the same lot.

[Amend. Coun. J. 3-14-57, p. 4430.]

50-2.2. Buildings of Type II construction shall be located not less than three feet from an interior lot line and not less than six feet from another building on the same lot unless the wall facing such lot line or adjoining building is constructed of materials providing fire resistance of not less than two hours and with all openings protected as required in section 62-2.4.

50-2.3. Every building or structure, except accessory buildings, shall front on a street or public way not less than thirty feet wide or shall have access to such a street or public way by means of an unobstructed open area not less than ten feet wide.

50-2.4. Nothing in this chapter shall be interpreted to prevent the application of location limitations required by the Chicago Zoning Ordinance.

50-3. Buildings or structures hereafter erected in Fire District No. 1 shall comply with the requirements of sections 50-3.1 to 50-3.3, inclusive.

50-3.1. Buildings or structures of Types IV-A and IV-B construction shall not be erected hereafter in Fire District No. 1 except for the following uses:

- (a) Fences not exceeding ten feet in height.
- (b) Temporary platforms, reviewing stands, builders' shanties and similar miscellaneous structures erected for a limited period of time as approved by the commissioner of buildings.

(c) Coal and material bins, water towers and trestles constructed of heavy timber having minimum sizes conforming to the requirements of Type III-A, Heavy Timber Construction.

(d) Storm enclosures not exceeding twelve feet in height, nor more than three feet wider than the entrance doors which they serve.

(e) Boathouses not exceeding 1,500 square feet in area nor twenty-five feet in height.

(f) Tanks.

(h) Miscellaneous structures as provided in chapter 61.

50-3.2. All roof coverings shall be of Class A or Class B materials complying with the requirements of section 62-8.

50-3.3. The limitation of Hazardous Use Units in Fire District No. 1 shall be in accordance with the provisions of chapter 60 of this code.

50-4. Every building or structure hereafter erected in Fire District No. 2 shall comply with the requirements of sections 50-4.1 and 50-4.2.

50-4.1. Buildings or structures of Type IV-B construction shall not be erected hereafter in Fire District No. 2 except for the following uses:

(a) All uses permitted in Fire District No. 1.

(b) Frame porches complying with the requirements of section 62-7.4.

(c) Miscellaneous structures as provided in chapter 61.

(d) Portable buildings used solely for school purposes, provided that no such unit shall be kept on a single site for a period of more than five years after the date of issue of the original permit and provided also that each such unit shall in no case be nearer than ten feet to any other building at any point.

50-4.2. All roof coverings shall be of Class A, Class B or Class C materials complying with the requirements of section 62-8.

50-5. Every building or structure hereafter erected in Fire District No. 3 shall comply with the requirements of sections 50-5.1 and 50-5.2.

50-5.1. Buildings and structures hereafter erected in Fire District No. 3 may be of any type of construction permitted under the height and area limitations established in chapter 51 and complying with other provisions of this code.

50-5.2. All roof coverings shall be of Class A, Class B or Class C materials.

50-6. No existing building shall be increased in height or area unless it is of a type of construction permitted for new buildings in the fire district in which it is located or is altered to comply with requirements for such type of construction.

50-7. Buildings located partly in one fire district and partly in another shall be considered to be in the more restricted fire district when more than one-third of its total floor area is located in such district.

50-8. The boundaries of Fire Districts shall be as follows:

(a) *Fire District No. 1.*

Fire District No. 1 shall include the territory bounded on the east by Lake Michigan, on the west by the center line of Halsted Street and Halsted Street, on the north by the center line of Chicago Avenue and Chicago Avenue, and on the south by the center line of Roosevelt Road and Roosevelt Road.

(b) *Fire District No. 2.*

Fire District No. 2 shall include the territory within the "fire limits" and "provisional fire limits" as established in chapter 89 of this code, except the territory included within Fire District No. 1.

(c) *Fire District No. 3.*

Fire District No. 3 shall include all territory within the corporate limits of the city except the territory included within Fire District No. 1 and the territory included within Fire District No. 2.

CHAPTER 51

HEIGHT AND AREA LIMITATIONS

- | | |
|---|---|
| <p>51-1. Height limitations</p> <p>51-1.1. Application of height limitations</p> <p>51-1.2. Maximum allowable heights of buildings</p> <p>51-1.3. Exceptions to height limitations</p> <p>51-2. Area limitations</p> <p>51-2.1. Application of area limitations</p> | <p>51-2.2. Area limitations—one story buildings</p> <p>51-2.3. Area limitations—multi-story buildings</p> <p>51-2.4. Exceptions to area limitations</p> <p>51-3. Mixed occupancy</p> <p>51-3.1. Height and area limitations</p> <p>51-3.2. Exceptions to height limitations</p> |
|---|---|

51-1. Every building or structure hereafter erected shall conform to the requirements of height limitation as provided in sections 51-1.1 to 51-1.3, inclusive.

51-1.1. (a) The maximum height of buildings shall be governed by the occupancy classification and type of construction as required in this chapter.

(b) Nothing in this chapter shall be interpreted to prevent the application of other limitations required by the Chicago Zoning Ordinance.

(c) The height in feet shall be taken as the vertical distance from the average grade to the highest point of the building. In determining height limits, parapet walls not exceeding three feet in height, pent-houses, roof tanks, bulkheads, chimneys and similar roof structures shall not be included unless the aggregate of such structures exceeds one-third of the area of the roof of the building.

(d) The number of stories shall be taken as the actual number of stories above grade. The following shall not be regarded as stories:

(1) Basements having a ceiling height of not more than seven feet above grade, when permitted by zoning ordinance.

(2) Mezzanine floors or balconies having an area not exceeding twenty per cent of the floor area of the story in which they occur. In one story building of Types II, III-A or III-B construction when unlimited areas are permitted, mezzanine floors shall not exceed 8,000 square feet in area.

(3) Enclosed monitor spaces in Industrial or Storage Units used only for employees' toilets, lockers or similar uses.

[Amend. Coun. J. 3-14-57, p. 4430.]

51-1.2. Except as provided in section 51-1.3, no building shall be hereafter erected or altered to exceed the maximum allowable heights established in Table 51-1.2.

TABLE 51-1.2. MAXIMUM ALLOWABLE HEIGHTS OF BUILDINGS

Occupancy Classification	Construction Type									
		I-A	I-B	I-C	II	III-A	III-B	III-C	IV-A	IV-B
A. Residential	Stories Feet	NL NL	12 150	6 80	1 20	4 55	4 55	2(a) 30	2(a) 30	2(a) 30
B. Institutional	Stories Feet	NL NL	10 130	4 55	1 20	1 20	1 20	NP —	NP —	NP —
C-1. Large Assembly	Stories Feet	NL NL	8 105	2 50	NP —	2 50	2 50	NP —	NP —	NP —
C-2. Small Assembly	Stories Feet	NL NL	10 130	4 55	1 30	2 50	2 50	1 30	1 30	1 30
C-3. Schools	Stories Feet	NL NL	10 130	4 55	1 20	2 30	2 30	1 20	1 20	1 20
D. Open Air Assembly	Maximum heights established in Chapter 55									
E. Business	Stories Feet	NL NL	12 150	6(b) 80(b)	1 20	5(b) 65(b)	4 55	3 45	1 20	1 20
F. Mercantile	Stories Feet	NL NL	8 105	4 55	1 20	5(b) 65(b)	3 45	2 30	1 20	1 20
G-1. Industrial Low Hazard	Stories Feet	NL NL	12 150	6(b) 80(b)	2 40	5(b) 65(b)	4 55	3 45	1 30	1 30
G-2. Industrial Moderate Hazard	Stories Feet	8(c) 105(c)	5(b) 65(b)	4(b) 55(b)	1 40	5(b) 65(b)	4 55	2(b) 30(b)	1 30	1 30
H-1. Storage Low Hazard	Stories Feet	NL NL	12 150	6(b) 80(b)	2 40	5(b) 65(b)	4 55	3 45	1 30	1 30
H-2. Storage Moderate Hazard	Stories Feet	8(c) 105(c)	5(b) 65(b)	4(b) 55(b)	1 40	5(b) 65(b)	3(b) 45(b)	2(b) 30(b)	1 30	1 30
H-3. Garages	Stories Feet	4(c) 55(c)	3 40	3 40	1 20	2 30	2 30	1 20	NP —	NP —
I. Hazardous Use	Maximum allowable heights established in Chapter 60									
J. Miscellaneous Buildings and Structures	Maximum allowable heights established in Chapter 61									

NOTES:

(a) Attic floor allowed in addition when used for storage purposes only.

(b) One additional story and fifteen feet additional height allowed when the building is equipped throughout with approved automatic sprinkler system.

(c) Height shall not be limited when building is equipped throughout with an approved automatic sprinkler system.

NP—Not permitted.

NL—Not limited.

51-1.3. Towers, steeples and similar structures, not intended or used for human occupancy and not exceeding in area twenty-five per cent of the ground area of the building on which they are erected, may be erected to a height not exceeding sixty feet above the height limitations established in section 51-1.2, except that water tanks or towers for fire protection purposes, whether supported directly on buildings or on independent ground structures, may be erected to a height not exceeding sixty feet above the maximum height of the building or group of buildings which is served or protected by such water tanks.

51-2. Every building or structure hereafter erected shall conform to the requirements of area limitations as provided in sections 51-2.1 to 51-2.4, inclusive.

51-2.1. (a) The maximum floor area of buildings shall be governed by the occupancy classification, the number of stories and the type of construction as required in this section.

(b) Nothing in this section shall be interpreted to prevent the application of other area restrictions required by the Chicago Zoning Ordinance.

(c) In the application of area limitations, each part of a building separated from all other parts of the building by fire walls as defined in section 62-1.1 shall be deemed to be a separate building.

51-2.2. Except as provided in section 51-2.4, the floor area of any one-story building shall not exceed the basic areas established in Table 51-2.2.

TABLE 51-2.2. BASIC MAXIMUM AREAS—ONE-STORY BUILDINGS
(SQUARE FEET)

Occupancy Classification	Construction Type								
	I-A	I-B	I-C	II	III-A	III-B	III-C	IV-A	IV-B
A. Residential	NL	NL	24,000	10,000	10,000	10,000	8,000	5,000	3,000
B. Institutional	NL	NL	16,000	6,000	6,000	6,000	NP	NP	NP
C-1. Large Assembly	NL	NL	NL(a) 24,000	20,000(a) 8,000	25,000(a) 10,000	20,000(a) 8,000	NP	NP	NP
C-2. Small Assembly	NL	NL	NL(a) 24,000	20,000(a) 8,000	25,000(a) 10,000	20,000(a) 8,000	NP(b) 5,000(c)	NP(b) 3,000(c)	NP(b) 1,500(c)
C-3. Schools	NL	NL	NL(a) 24,000	20,000(a) 8,000	25,000(a) 10,000	20,000(a) 8,000	6,000	4,000	2,000
D. Open Air Assembly	Maximum areas established in Chapter 55								
E. Business	NL	NL	NL	NL(a) 12,000	NL(a) 15,000	NL(a) 12,000	10,000	6,000	4,000
F. Mercantile	NL	NL	NL	NL(a) 10,000	NL(a) 12,000	NL(a) 10,000	8,000	5,000	3,000
G-1. Industrial Low Hazard	NL	NL	NL	NL(a) 12,000	NL(a) 15,000	NL(a) 12,000	10,000	6,000	4,000
G-2. Industrial Moderate Hazard	NL	NL	NL	NL(a) 10,000	NL(a) 12,000	NL(a) 10,000	8,000	5,000	3,000
H-1. Storage Low Hazard	NL	NL	NL	NL(a) 12,000	NL(a) 15,000	NL(a) 12,000	10,000	6,000	4,000
H-2. Storage Moderate Hazard	NL	NL	NL	NL(a) 10,000	NL(a) 12,000	NL(a) 10,000	8,000	5,000	3,000
H-3. Garages	40,000	35,000	30,000	15,000	20,000	15,000	10,000	NP	NP
I. Hazardous Use	Maximum areas established in Chapter 60								
J. Miscellaneous Buildings and Structures	Maximum areas established in Chapter 61								

NOTES: NL—Not Limited. In buildings of unlimited area, no portion of such buildings shall be more than 300 feet from an exterior wall facing an open, accessible space not less than 30 feet wide consisting of a public way, railroad right-of-way, waterway, park or a court, accessible from a public way; except that such maximum distance from an exterior wall may be not more than 500 feet in buildings of Low Hazard Industrial or Low Hazard Storage Units.

NP—Not Permitted.

- (a) These areas permitted only when the first floor construction and all construction below the first floor level is of Type I-A construction.
- (b) Theatres.
- (c) Assembly units other than Theatres.
See section 51-2.4 for allowable increase in areas for frontage and automatic sprinkler equipment.

51-2.3. Except as provided in section 51-2.4, the area of any floor of a building exceeding one story in height shall not exceed the basic areas established in Table 51-2.3, multiplied by the following factors:

Number of Stories	Factor
2	1.00
3	.90
4	.85
5	.80
6	.75
7	.70
8 or more	.65

TABLE 51-2.3. BASIC MAXIMUM AREAS—MULTI-STORY BUILDINGS
(SQUARE FEET)

Occupancy Classification	Construction Type								
	I-A	I-B	I-C	II	III-A	III-B	III-C	IV-A	IV-B
A. Residential	NL	NL	20,000	NP	8,000	8,000	6,000	4,000	2,000
B. Institutional	24,000	16,000	12,000	NP	NP	NP	NP	NP	NP
C-1. Large Assembly	NL	NL	16,000	NP	6,000	6,000	NP	NP	NP
C-2. Small Assembly	NL	NL	16,000	NP	6,000	6,000	NP	NP	NP
C-3. Schools	NL	NL	16,000	NP	6,000	6,000	NP	NP	NP
D. Open Air Assembly	Maximum areas established in Chapter 55								
E. Business	NL	NL	20,000	NP	10,000	10,000	8,000	NP	NP
F. Mercantile	30,000	20,000	16,000	NP	8,000	8,000	6,000	NP	NP
G-1. Industrial Low Hazard	NL	30,000	20,000	10,000	10,000	10,000	8,000	NP	NP
G-2. Industrial Moderate Hazard	30,000	20,000	16,000	NP	8,000	8,000	6,000	NP	NP
H-1. Storage Low Hazard	NL	30,000	20,000	10,000	10,000	10,000	8,000	NP	NP
H-2. Storage Moderate Hazard	30,000	20,000	16,000	NP	8,000	8,000	6,000	NP	NP
H-3. Garages	25,000	15,000	10,000	NP	6,000	6,000	NP	NP	NP
I. Hazardous Use	Maximum areas established in Chapter 60								
J. Miscellaneous Buildings and Structures	Maximum areas established in Chapter 61								

NOTES: NL—Not Limited. In buildings of unlimited area, no portion of such buildings shall be more than 300 feet from an exterior wall facing an open, accessible space not less than 30 feet wide consisting of a public way, railroad right-of-way, waterway, park or a court, accessible from a public way; except that such maximum distance from an exterior wall may be not more than 500 feet in buildings of Low Hazard Industrial or Low Hazard Storage Units.

NP—Not Permitted.

See section 51-2.4 for allowable increase in areas for frontage and automatic sprinkler equipment.

51-2.4. (a) Area Increase for Street Frontage and Separation.

In buildings except Institutional and Assembly Units, when more than twenty-five percent of the perimeter of a building faces a public street or other open area not less than thirty feet wide accessible to a public street, the allowable basic floor area may be increased as follows:

(1) When (I) equals the percentage by which areas established in sections 51-2.2 and 51-2.3 may be increased, 'P' equals the perimeter of the building and 'F' equals the frontage, the following formula shall be used:

$$I = \frac{200 F}{P} - 50$$

Such increase shall not exceed 100% of the established basis floor area.

(b) Area Increase for Sprinklers.

Floor areas may be increased 100 per cent of the areas established in sections 51-2.2, 51-2.3 and 51-2.4 (a) when the building is equipped throughout with an approved automatic sprinkler system.

(c) Areas of Basements.

The area of a basement shall not exceed the maximum floor area permitted for the building; provided, however, that every basement exceeding 40,000 square feet in area shall be subdivided by fire walls complying with the requirements of section 62-1 into areas not exceeding 40,000 square feet. [Amend. Coun. J. 3-14-57, p. 4430.]

51-3. Buildings or structures of mixed occupancy hereafter erected, altered or converted shall be governed by the height and area limitations applying to the occupancy having the most restrictive limitations. [Amend. Coun. J. 11-7-58, p. 8380.]

51-3.1. [Repealed. Coun. J. 11-7-58, p. 8380.]

51-3.2. [Repealed. Coun. J. 11-7-58, p. 8380.]

CHAPTER 52

RESIDENTIAL UNITS

- | | |
|---|--|
| <p>52-1. General requirements</p> <p>52-2. Special enclosures and separations</p> <p>52-3. Basement ventilation</p> <p>52-4. Minimum room areas</p> | <p>52-5. Ceiling heights</p> <p>52-6. Room arrangement</p> <p>52-7. Basement rooms</p> <p>52-8. Private garages</p> <p>52-9. Stairway location</p> |
|---|--|

52-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a Residential Unit as defined in section 48-2 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 49. *Classification of Buildings by Construction Type.*

Chapter 50. *Location Limitations.*

Section 50-2. Location on Property.

Section 50-3, 50-4, 50-5, Limitations within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Section 62-3. Protection of Stairs, Shafts and Vertical Openings.

Section 62-4. Enclosure of Heating Plants and Boiler Rooms.

Section 62-5. Other Enclosures and Separations.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-1. Court and Yard Requirements.

Section 66-2. Natural Lighting.

Section 66-3. Natural Ventilation.

Section 66-4. Alcoves.

Section 66-5. Sanitation Requirements.

Chapter 67. *Exit Requirements.*

Section 67-3. Types of Exits.

- Section 67-4. Minimum Number of Exits.
- Section 67-5. Arrangement and Location of Exits.
- Section 67-6. Travel Distance to Exits.
- Section 67-7. Width of Exits.
- Section 67-8. Outside Exits.
- Section 67-9. Doors.
- Section 67-10. Stairs.
- Section 67-11. Smokeproof Towers.
- Section 67-12. Ramps.
- Section 67-13. Horizontal Exits.
- Section 67-15. Exterior Stairs.
- Section 67-16. Fire Escapes.
- Section 67-17. Exit Lighting.
- Section 67-18. Exit Signs.

- Chapter 68. *Minimum Design Loads.*
- Chapter 69. *Materials, Methods and Tests.*
- Chapter 70. *Foundations.*
- Chapter 71. *Masonry Construction.*
- Chapter 72. *Wood Construction.*
- Chapter 73. *Reinforced Concrete Construction.*
- Chapter 74. *Steel and Metal Construction.*
- Chapter 75. *Safety Requirements.*
- Chapter 76. *Safeguards During Construction.*
- Chapter 77. *Use of Public Property.*
- Chapter 78. *Existing Buildings.*
- Chapter 79. *Elevators.*
- Chapter 79.1. *Warm Air Heating Plants.*
- Chapter 80. *Heating.*
- Chapter 81. *Ventilation.*
- Chapters 82, 83, 162. *Plumbing.*
- Chapters 86, 87, 88. *Electrical Requirements.*

52-2. (a) In all Multiple Dwellings every dwelling unit shall be separated from all other parts of the building by walls or partitions of non-combustible construction, or of construction consisting of wood studs with metal lath and plaster, or an equivalent non-combustible surface material, or with perforated gypsum board and plaster, or an equivalent non-combustible surface material, and shall provide fire resistance of not less than one hour.

(b) In Multiple Dwellings partitions, floor construction and ceiling construction enclosing public corridors shall be of non-combustible construction, or shall be constructed of wood joists or wood studs with metal lath and plaster, or an equivalent non-combustible surface material, or perforated gypsum board and plaster, or an equivalent non-combustible surface material, and shall provide fire resistance of not less than one hour. Any openings shall be protected by doors having fire resistance of not less than a $1\frac{3}{4}$ " solid flush panel door with a rebated frame of solid material $1\frac{3}{4}$ " thick or metal frames of not less than #16 gauge.

(c) Multiple Dwellings, except buildings of Type I-A, I-B, or I-C construction, shall be divided into areas not exceeding 5,000 square feet by vertical

separations providing fire resistance of not less than two hours and extending from the basement floor to the underside of the roof sheathing. All openings in such vertical separations shall be protected with Class C fire doors. [Amend. Coun. J. 3-14-57, p. 4430.]

52-3. Basements in Single and Two Family Dwellings shall be provided with windows or other openable devices providing openings to the outside air of not less than two per cent of the floor area.

52-4. (a) When a room is used for cooking, dining and living purposes, it shall have a floor area of not less than 180 square feet.

(b) At least one room in every family unit shall have a floor area of not less than 150 square feet.

(c) Kitchens or dining space shall have a floor area of not less than sixty square feet.

(d) All other habitable rooms shall have a floor area of not less than seventy square feet.

(e) Alcoves complying with the requirements of section 66-4 shall not be considered as separate rooms.

52-5. The minimum ceiling height in a habitable room shall be not less than seven feet six inches except as follows:

(a) Rooms under sloping roofs shall have a minimum ceiling height of seven feet six inches for not less than fifty per cent of the floor area having a ceiling height of five feet or more. No portion of the floor area having a ceiling height of less than five feet shall be considered as a part of the required floor area.

(b) In any room, beams or furred spaces constituting not more than twenty per cent of the ceiling area may have a height of not less than seven feet.

52-6. (a) Access to each dwelling unit shall be provided without passing through any part of any other dwelling unit.

(b) Access to any required exit of a dwelling unit from all habitable rooms shall be provided without passing through a bedroom, bathroom or toilet room.

52-7. Habitable rooms shall be permitted in a basement only when the floor is not more than two feet below finished grade level at all exterior walls containing openings required for natural light and ventilation.

52-8. Private garages shall comply with the requirements of section 61-8.

52-9. Stairways serving second floors in Class A-1 buildings shall be interior stairways. [Added. Coun. J. 8-15-51, p. 813.]

CHAPTER 53

INSTITUTIONAL UNITS

- | | |
|--|---|
| 53-1. General requirements
53-2. Jails
53-3. Special enclosures and separations
53-4. Operating rooms | 53-5. Storage of flammable films
53-6. Court and yard requirements
53-7. Minimum room areas
53-8. Ceiling heights
53-9. Basement rooms |
|--|---|

53-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an Institutional Unit as defined in section 48-3 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 50. *Location Limitations.*

Section 50-2. Location on property.

Sections 50-3, 50-4, 50-5. Limitations within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Sections 62-3, 62-4, 62-5. Enclosures and Separations.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-2. Natural Lighting.

Section 66-3. Natural Ventilation.

Section 66-5. Sanitation Requirements.

Chapter 67. *Exit Requirements.*

Section 67-3. Types of Exits.

Section 67-4. Minimum Number of Exits.

Section 67-5. Arrangement and Location of Exits.

Section 67-6. Travel Distance to Exits.

Section 67-7. Width of Exits.

Section 67-8. Outside Exits.

Section 67-9. Doors.

- Section 67-10. Stairs.
- Section 67-11. Smokeproof Towers.
- Section 67-12. Ramps.
- Section 67-13. Horizontal Exits.
- Section 67-16. Fire Escapes.
- Section 67-17. Exit Lighting.
- Section 67-18. Exit Signs.

- Chapter 68. *Minimum Design Loads.*
- Chapter 69. *Materials, Methods and Tests.*
- Chapter 70. *Foundations.*
- Chapter 71. *Masonry Construction.*
- Chapter 72. *Wood Construction.*
- Chapter 73. *Reinforced Concrete Construction.*
- Chapter 74. *Steel and Metal Construction.*
- Chapter 75. *Safety Requirements.*
- Chapter 76. *Safeguards during Construction.*
- Chapter 77. *Use of Public Property.*
- Chapter 78. *Existing Buildings.*
- Chapter 79. *Elevators.*
- Chapter 79.1. *Warm Air Heating Plants.*
- Chapter 80. *Heating.*
- Chapter 81. *Ventilation.*
- Chapters 82, 83, 162. *Plumbing.*
- Chapters 86, 87, 88. *Electrical Requirements.*

53-2. (a) Jails shall be only of Types I-A, I-B or I-C construction, except that jails or lockups having an occupancy of not more than ten prisoners may be of Types II, III-A or III-B construction.

(b) Natural light and ventilation for cells and lockups shall be furnished by openings to the outside air complying with the requirements of chapter 66. Such openings may be in a wall on the opposite of a corridor or gallery providing that the only obstruction thereto consists of the required restraining bars and devices.

53-3. (a) Partitions enclosing corridors required as a means of exit and partitions enclosing bedrooms or bed wards shall be of non-combustible construction providing fire resistance of not less than one hour. All door openings in such partitions shall be protected with doors not less fire resistive than solid wood doors one and three-fourths inches thick. Glazed openings required for observation shall be protected with materials not less fire resistive than wire glass one-quarter inch thick.

(b) In every Institutional Unit hereafter erected, altered or converted, over two stories in height, every floor over 8,000 square feet which contains bed rooms or wards shall be divided into two areas by a standard fire wall as provided in section 62-1. The openings in said fire wall shall be protected by standard Class A, double, automatic fire doors and the corridor openings and the doorways of rooms used for patients shall be wide enough to permit passage of the patients' beds.

53-4. The construction and equipment of operating rooms shall also comply with the requirements of section 88-550.22 of the Electrical Code. [Amend. Coun. J. 3-14-57, p. 4430.]

53-5. All flammable photographic x-ray and other films shall be stored in a standard fireproof vault or fireproof cabinet constructed as required by chapter 60 of this code.

53-6. Courts and yards required for natural light and ventilation in sleeping rooms shall comply with the requirements of section 66-1, except that no court or yard shall have a dimension of less than ten feet.

53-7. The minimum area of sleeping rooms in Institutional Units shall be not less than the following:

Per adult	80 square feet
Per child 3 to 14 years of age	50 square feet
Per infant less than 3 years of age.....	30 square feet

53-8. (a) Minimum ceiling height of habitable rooms in Institutional Units shall be not less than the following:

- Rooms with area of less than 200 square feet—8 feet;
- Rooms with area of 200 square feet or more—9 feet.

(b) In any room, beams or furred spaces constituting not more than twenty per cent of the ceiling area may have a height of not less than seven feet.

53-9. No sleeping rooms shall be permitted below grade.

CHAPTER 54

ASSEMBLY UNITS

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| <p>54-1. General requirements</p> <p>54-2. Capacity of schools</p> <p>54-3. Frontage requirements</p> <p>54-4. Special height limitations</p> <p>54-5. Special enclosures and separations</p> <p>54-6. Special fire-resistive requirements</p> <p>54-6.1. Definitions</p> <p>54-6.2. Construction requirements—
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54-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an Assembly Unit as defined in section 48-4 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 48. *Classifications of Building by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 49. *Classification of Buildings by Construction Type.*

Chapter 50. *Location Limitations.*

Section 50-2. Location on Property.

Sections 50-3, 50-4, 50-5. Limitations within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Sections 62-3, 62-4, 62-5. Enclosures and Separations.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-2. Natural Lighting.

- Section 66-3. Natural Ventilation.
- Section 66-5. Sanitation Requirements.

Chapter 67. *Exit Requirements.*

- Section 67-3. Types of Exits.
- Section 67-4. Minimum Number of Exits.
- Section 67-5. Arrangement and Location of Exits.
- Section 67-6. Travel Distance to Exits.
- Section 67-7. Width of Exits.
- Section 67-8. Outside Exits.
- Section 67-9. Doors.
- Section 67-10. Stairs.
- Section 67-11. Smokeproof Towers.
- Section 67-12. Ramps.
- Section 67-13. Horizontal Exits.
- Section 67-15. Exterior Stairs.
- Section 67-16. Fire Escapes.
- Section 67-17. Exit Lighting.
- Section 67-18. Exit Signs.

Chapter 68. *Minimum Design Loads.*

Chapter 69. *Materials, Methods and Tests.*

Chapter 70. *Foundations.*

Chapter 71. *Masonry Construction.*

Chapter 72. *Wood Construction.*

Chapter 73. *Reinforced Concrete Construction.*

Chapter 74. *Steel and Metal Construction.*

Chapter 75. *Safety Requirements.*

Chapter 76. *Safeguards during Construction.*

Chapter 77. *Use of Public Property.*

Chapter 78. *Existing Buildings.*

Chapter 79. *Elevators.*

Chapter 79.1. *Warm Air Heating Plants.*

Chapter 80. *Heating.*

Chapter 81. *Ventilation.*

Chapters 82, 83, 162. *Plumbing.*

Chapters 86, 87, 88. *Electrical Requirements.*

54-2. The total capacity of a school shall be determined in accordance with the occupancy content factors established in section 48-13.1, except that rooms not used or used only occasionally by students shall not be included in computing each total capacity. Such rooms and spaces include the following:

- Assembly rooms and gymnasiums.
- Cafeterias and lunchrooms.
- Locker, toilet and storage rooms.
- Corridors and other circulation space.
- Service and equipment rooms.

54-3. Every Assembly Unit shall have frontage upon one or more open spaces consisting of streets not less than thirty feet wide or public alleys or other open spaces not less than ten feet wide which lead directly to a street. Frontage requirements shall be determined according to capacity and shall comply with the requirements established in Table 54-3.

TABLE 54-3. FRONTAGE REQUIRED FOR ASSEMBLY UNITS.

Capacity		Frontage	
Type I Schools	Other Assembly Units	On Street	On Street or Other Open Space
	200 or less	One Side	.....
501 or less	200 to 800	One Side	One Side
501 to 1000	More than 800	One Side	Two Sides
1001 to 2500	.....	Two Sides	One Side
More than 2500	.....	Three Sides	One Side

54-4. (a) The main seating level of every theater shall be so located that normal exits from the foyer shall lead to a public street without change in level other than by means of ramps having a slope not exceeding one in ten.

(b) No seating level in rooms used for assembly occupancy and having a capacity of more than 300 persons shall be at a level more than twenty feet above grade except in buildings of Types I-A or I-B construction.

(c) No assembly occupancy shall be located at a level more than twenty feet below grade in buildings of Types I-A or I-B construction, nor more than ten feet below grade in buildings of other types of construction.

54-5. (a) The floor construction and enclosing partitions of assembly rooms having a capacity exceeding 300 persons shall be of construction providing fire resistance of not less than two hours.

(b) The floor construction and enclosing partitions of assembly rooms having a capacity not exceeding 300 persons shall be of construction providing fire resistance of not less than one hour.

(c) Partitions, floor constructions and ceiling construction enclosing all public corridors of Assembly Units shall be of construction providing fire resistance of not less than one hour.

54-6. Every Assembly Unit hereafter erected shall comply with special fire-resistive requirements as provided in sections 54-6.1 to 54-6.7, inclusive.

54-6.1. The terms used in this section are hereby defined as follows:

(a) Stage.

The space in a theater or assembly room separated from the auditorium equipped for theatrical or similar performances that provide for the use of curtains, portable or fixed scenery, lights, or mechanical appliances.

Recesses at the front of an auditorium used or designed solely for the mounting of a motion picture screen and its required sound equipment containing no fixed or movable scenery other than curtains of flame-resistive material shall not be deemed to be a stage under the requirements of this section.

(b) Type 1 Stage.

Every stage other than a Type 2 stage as defined in paragraph (c).

(c) Type 2 Stage.

A stage complying with each of the following conditions:

(1) The stage shall be located in a school, church, community building, club or similar occupancy in which the use of the stage for theatrical productions is occasional.

(2) The capacity of such assembly rooms shall not exceed 1,000 persons.

(3) The proscenium opening between the stage and the auditorium shall not exceed thirty-two feet in width nor twenty-two feet in height.

(4) All stage material, scenery, decorations, drapes and curtains shall be of non-combustible materials.

(d) Stage Block.

That portion of a theater or assembly room containing only the stage or the stage in combination with dressing rooms, storage and property rooms, workshops and other rooms appurtenant to the operation thereof.

(e) Projection Block.

That portion of a theater or assembly room containing a projection room alone or in combination with other rooms appurtenant to the operation thereof.

(f) Dressing Room.

A room used or intended to be used by a performer or performers for dressing or changing of clothing.

(g) Proscenium.

The vertical plane of separation between an auditorium and a stage.

(h) Property Room.

A room for the storage of any adjunct of a theatrical or similar performance, except scenery, commonly known and described as stage properties.

(i) Stage Workshop.

Any shop or room in which carpentry, electrical work, painting, or any other work incidental to the preparation, operation, or maintenance of any stage is done.

(j) Storage Room.

A room other than a property room used for storage purposes. [Amend. Coun. J. 1-20-50, p. 5758.]

54-6.2. Type 1 Stages shall comply with the following construction requirements:

(a) Enclosure.

The stage block, including the stage and dressing rooms, storage rooms, property rooms, workshops and other rooms appurtenant to the operation thereof, shall be enclosed by walls providing fire resistance of not less than three hours. The floor below the stage block and the floor or roof above the stage block shall be of Type I-A construction.

(b) Protection of Openings.

(1) There shall be no openings in the wall separating the stage from the auditorium except the proscenium opening, one doorway at each side of the proscenium opening at the stage floor level, one doorway at the level of the musicians' pit and, where necessary, a doorway to the organ. Each such doorway shall be not more than twenty-one square feet in area and shall be protected by an automatic Class A fire door on one side of the wall and a self-closing Class A fire door on the other side of the wall.

(2) The proscenium opening shall be protected by a proscenium curtain complying with the requirements of section 54-6.5.

(3) In the other enclosing walls of the stage block, door openings shall be equipped with approved self-closing Class D fire doors, and windows shall be approved fire windows. No windows shall be permitted where such walls are located within five feet of a property line other than a street line.

(c) Stage Floor.

Trap doors shall be located only in an area not extending beyond the width of the proscenium opening nor within one foot of the proscenium curtain. Trap doors shall be tight-fitting and constructed of solid wood not less than two inches thick and shall be supported by structural members of non-combustible materials. Except within the area where trapdoors are permitted for working scenery, traps and appliances, the stage floor shall be of Type I-A construction.

(d) Auxiliary Rooms.

Dressing rooms, storage rooms, property rooms, workshops and other rooms appurtenant to the stage shall be of Types I-A or I-B construction and shall be separated from the stage and other parts of the buildings by walls providing fire resistance of not less than one hour. Such rooms and spaces shall be separated from each other by non-combustible partitions providing fire resistance of not less than one hour. No openings connecting such rooms with the stage shall be permitted except the necessary doorways, which shall be protected with self-closing Class C fire doors.

(e) Rigging Lofts.

The rigging lofts and fly galleries, including pin-rails, shall be of non-combustible materials.

(f) Lighting Troughs.

The troughs or frames for footlights and border lights shall be of metal or other non-combustible materials. When disappearing footlights are used, the frame and upper face of the cover may be of hard wood.

(g) Protection of Electrical Equipment.

All electrical equipment shall be protected from falling objects and from contact with stage equipment, and shall conform with the electrical requirements of chapters 86, 87 and 88.

(h) Storage Space in Rooms.

All shelving, lockers and similar fixtures in dressing rooms, property rooms or storage rooms, shall be constructed of non-combustible materials.

54-6.3. Type 2 Stages shall conform to the following construction requirements.

(e) Enclosure.

The stage block, including the stage, and dressing rooms, storage rooms, property rooms, workshops and other rooms appurtenant to the operation thereof, shall be enclosed by walls, floors and roof of non-combustible materials providing fire resistance of not less than one hour.

(b) Stage Floor.

Except where trap doors are permitted for the working of scenery, traps and appliances, the stage floor shall be of construction not less fire-resistive than Type I-C. The location of trap doors shall conform to the requirements of Type 1 Stages.

(c) Auxiliary Rooms.

Dressing rooms, storage rooms, property rooms, workshops and other rooms appurtenant to the stage shall be of construction not less fire-resistive than Type I-C.

(d) Equipment.

Rigging lofts, lighting troughs and electrical equipment, shall conform to the requirements for Type I Stages.

(e) All shelving, lockers and similar fixtures in dressing rooms, property rooms or storage rooms shall be constructed by non-combustible materials.

54-6.4. Every Type I stage shall be provided with a means of natural ventilation so arranged and equipped as to function in case of fire. Such means of ventilation shall consist of not less than one vent nor more than three vents to the outer air meeting the requirements of this section.

(a) *Location.* The stage openings to stage vents shall be located in the soffit of the ceiling of the stage at points which will effectively ventilate the stage area in the event of fire.

(b) *Area.* The aggregate area of the stage openings of all stage vents shall be not less than five per cent of the floor area of the stage.

(c) *Shafts and Vent Openings.*

(1) Each stage opening shall be connected by a shaft to vent openings located not less than fifteen feet above any roof which is within a horizontal distance of ten feet from any vent opening.

(2) The angle between the axis of the shaft and the vertical shall not exceed thirty degrees.

(3) The cross-sectional area of any shaft and the clear area of any vent opening shall be not less than the area of the stage opening served.

(4) Vent openings shall not be located within ten feet of a lot line nor within twenty feet of any door, window or wall opening on the same lot.

(d) *Enclosure of Shafts.* All shafts shall be enclosed with construction providing fire resistance of not less than two hours; except that shafts passing through any portion of a building outside the stage block shall be enclosed with construction providing fire resistance of not less than three hours.

(e) *Dampers.* All stage vents shall also be equipped with damper controls as required by sections 88-520.6(1) and (m) of the Electrical Code.

(f) *Tests.* Upon completion of the installation, every stage vent and all operating mechanisms and appurtenances shall pass a test conducted by the department of buildings. The test shall demonstrate that each of the devices for operation and control, required under this section, are properly operative. [Amend. Coun. J. 3-14-57, p. 4430.]

54-6.5. Every proscenium opening in a Type I Stage shall be provided with a proscenium fire curtain complying with the requirements of this section.

(a) *Materials.* The curtain shall be of approved metal construction, except that an approved reinforced asbestos curtain may be used when the proscenium opening does not exceed twenty-eight feet in height.

(b) *Performance Requirements.* The curtain shall be so designed and constructed that for at least thirty minutes it will prevent all passage of flame and withstand without failure a temperature of not less than 1700° Fahrenheit and an air pressure normal to its surface of not less than ten pounds per square foot. When closed, the curtain shall be reasonably tight against the passage of smoke.

(c) *Construction.* The curtain shall overlap the proscenium opening by at least two feet at the top and eighteen inches at each side, and shall slide vertically at each side within iron or steel grooves which shall have a minimum depth of twelve inches. No part of any curtain shall be supported by or fastened to combustible material.

(d) The curtain shall be so arranged and maintained that, in case of fire, it will be released automatically and instantly by an approved heat-actuated device, and will descend slowly and safely by its own weight to completely close the proscenium opening within thirty seconds, taking not over five seconds for the bottom five feet. It shall also be equipped with effective devices to permit prompt and immediate closing of the proscenium opening by manual means.

(e) *Machinery.* All machines and hoisting gear shall be designed in accordance with safe practice. The "Safety Code for Elevators, Dumbwaiters, Escalators", American Standards Association A17.1-1937, shall be considered as a guide to safe practice except as otherwise stated in this code. Travel limit stops and room for over-travel shall be provided.

(f) *Proscenium fire curtains—Type I stages.* Where a Type I stage in an existing assembly unit has been abandoned for theatrical performances, the commissioner of buildings and the division marshal in charge of fire prevention may jointly approve the mounting of a motion picture screen and its required sound equipment providing:

(1) All combustible stage material and equipment and scenery is removed from the stage.

(2) Where stage is provided with automatic sprinkler system, such system shall be maintained in good working condition and under pressure at all times.

(3) Present automatic stage vents to be maintained in good working condition.

(4) Proscenium curtain need not be required if a one-hour fire resistive rating non-combustible separation is provided between the space required to install the screen with its sound equipment and the balance of the stage.

(5) Such a stage shall not again be used as a Type I stage, unless it is brought in compliance with the present code.

(6) No portion of such stage shall be used for storage or handling of material.

(7) The space between the screen and fire wall shall be sprinkled and vented, as called for in section 64-1 and section 64-5. [Amend. Coun. J. 5-28-58, p. 7799.]

54-6.6. (a) Enclosure. Every motion picture projector using flammable films, together with all electrical devices, other film equipment, and all films shall be enclosed in a room as herein required.

(b) Construction. Every projection block shall be enclosed with walls, floors and ceiling providing fire resistance of not less than two hours. All wall and ceiling finish, fixtures and trim of the projection room and rooms appurtenant thereto shall be of non-combustible material.

(c) Room Area and Ceiling Height for Dual Projection Booths. Room area and ceiling height of projection rooms shall be as provided in section 88-540.3 of the Electrical Code.

(d) Protection of Openings. Doors to projection blocks shall be self-closing Class B Fire Doors. Openings or portholes in projection rooms shall be provided with automatic metal shutters operating in vertical guides, arranged to fall by gravity when released and completely cover the portholes. Such shutters shall be controlled by heat-actuated devices arranged to close all shutters in the projection room automatically. In addition, there shall be provided suitable means for manually closing all shutters from a point within the projection room near each exit door.

Openings and shutters shall conform to the Regulations of the National Board of Fire Underwriters for Nitrocellulose Motion Picture Film, Pamphlet No. 40, July 1, 1939.

(e) Storage Limitations. No provision shall be made in any projection block for storing materials of a combustible nature other than films.

(f) Ventilation. Ventilation shall be provided as required in section 88-33.

(g) Projection rooms in theaters designed to house more than one motion picture projector shall be provided with not less than one water closet and one lavatory located within the projection block. [Amend. Coun. J. 1-20-50, p. 5758; 3-14-57, p. 4430.]

54-6.7. (a) Bowling pin finishing or refinishing operations shall be performed in a separate building or in a separate room, separated from the other parts of the building by walls or partitions providing fire resistance of not less than two hours. Openings in such walls and partitions shall be protected with Class C fire doors.

(b) Concealed spaces between a ceiling of a bowling alley and the roof construction immediately above shall comply with the following requirements:

(1) Such concealed spaces shall be divided into horizontal areas not exceeding 4,000 square feet by separations providing fire resistance of not less than one hour.

(2) Each concealed space shall be equipped with fire and explosion vents having a net open area of not less than 2% of the horizontal area of the concealed space. Such fire and explosion vents shall be actuated by a device meeting the approval of the bureau of fire prevention and connected with a local alarm placed in the office of the bowling alley.

(3) A gravity type of roof ventilator shall be provided for each concealed space. Such ventilator shall be located at the high point of the roof and shall have a net open area of one square inch for each ten square feet of horizontal area of the concealed space.

(c) Mechanical ventilating systems in bowling alleys shall be equipped with a rate of rise temperatures actuating device to stop operation of fans in the event of fire.

54-7. Every Class I School shall comply with the following planning requirements:

(a) Ceiling Heights.

(1) The minimum ceiling height in classrooms, study rooms and other rooms used for assembly purposes shall be as follows:

<i>Room Area</i>	<i>Minimum Average Ceiling Height</i>
Less than 200 sq. ft.....	8 ft.
200 sq. ft. to 2000 sq. ft.....	9 ft.
More than 2,000 sq. ft.....	12 ft.

(2) In any room, beams or furred spaces constituting not more than twenty per cent of the ceiling area may project not more than one foot below the minimum ceiling height.

(b) Basement Rooms. No floor of a classroom or study room shall be located more than two feet below the building grade adjacent to such rooms except rooms used for shops and other vocation classes.

[Amend. Coun. J. 11-7-58, p. 8380.]

54-8. Every room or space in an Assembly Unit shall comply with the applicable requirements of chapter 67 and with the special exit requirements of sections 54-8.1 to 54-8.12, inclusive:

54-8.1. The minimum number of exits from every room, space or seating level in Assembly Units shall be not less than the following:

<i>Capacity</i>	<i>Minimum Number of Exits</i>
50 or less	1
51 to 300	2
301 to 1,000	3
More than 1,000	4

54-8.2. (a) Schools.

The capacity of exits in schools shall be computed as follows:

- (1) Stairs and other vertical exits:
100 persons per unit of exit width.
- (2) Doorways, corridors and horizontal exit connections:
115 persons per unit of exit width.

When lockers are installed in corridors of schools, the full required clear width of the corridor shall be provided between locker doors when open.

(b) Assembly Units other than Schools.

The capacity of exits in Assembly Units other than schools shall be computed as follows:

- (1) Stairs and other vertical exits:
60 persons per unit of exit width.
- (2) Doorways, corridors and horizontal exit connections:
90 persons per unit of exit width.

Doors located at the end of an aisle and serving only that aisle shall not be required to have a width greater than the width of the aisle as provided in section 54-8.7.

54-8.3. (a) Exits shall be located as remote from each other as is practicable. In rooms, spaces or seating levels having fixed seats and requiring more than two exits, the exits shall be so located as to serve both sides of the front half and both sides of the rear half of the seating level.

(b) All required stairs in Type I Schools shall open directly to the outside air or to a public vestibule or lobby leading to the outside. The travel distance from the stairway to the outside exit door of such vestibule or lobby shall not exceed twenty feet.

54-8.4. (a) In theaters, the foyer at the main floor level shall connect to a public street or streets either directly or through a straight and unobstructed

corridor equal in minimum width to the aggregate required width of exit; except that not more than one-third of the aggregate exit width may lead to alleys, courts or exit passageways complying with the requirements of section 54-8.5. Foyers and connecting corridors may have ramps having a slope of not more than one in ten.

(b) In rooms of Assembly Units other than theaters, exits may lead to any horizontal or vertical means of exit complying with the requirements of chapter 67.

54-8.5. Every exterior exit of an Assembly Unit shall open directly to a public way or to an exit court or exit passageway complying with the following requirements:

(a) Construction of Exit Courts. The walls of every exit court shall be of construction providing fire resistance of not less than three hours. No door openings shall be permitted in any wall of such court except the exit doors from the Assembly Unit. Such door openings shall be protected with Class D or Class E fire doors. Every window opening in the walls of an exit court located below a level thirty feet above the top of the highest exit doorway shall be protected with a fire window or other approved opening protective assembly complying with the requirements of chapter 65.

(b) Construction of Exit Passageways. Every exit passageway shall be separated from other portions of the building by walls, floors and ceilings providing fire resistance of not less than three hours. There shall be no openings through such separation other than the required exit doors leading thereto.

(c) Width of Exit Courts and Exit Passageways. The minimum width of an exit court or exit passageway shall be not less than five feet, six inches. Such width shall be increased where necessary to provide a clear width at every point equal to twenty-two inches for each 90 persons served. Such increase in width shall be cumulative in the direction of exit.

(d) Ramps. Differences in level in exit courts and exit passageways shall be accommodated by ramps having a grade of not more than one in eight.

54-8.6. In theaters and similar Assembly Units having a capacity of 300 persons or more where persons are admitted to the building at times when seats are not available and are allowed to wait in a lobby or similar space, such use of lobby or similar space shall not encroach upon the required clear width of exits. The total required width of exits from the building shall be based on the total capacity of the building, including waiting spaces. The capacity of waiting spaces shall be computed at one person for each three square feet of waiting area.

54-8.7. All aisles and seating in Assembly Units shall comply with the requirements of this section.

(a) Arrangement of Aisles. Every aisle shall lead to an exit door or to another aisle leading directly to an exit.

(b) Seating. No row of seats shall have more than fourteen seats between aisles and not more than seven seats abutting an aisle at one end only, with the following exceptions:

(1) In Assembly Units of Type I-A or I-B construction, other than theaters, there may be not more than twenty seats between aisles and not more than ten seats abutting an aisle at one end only.

(2) When the distance between rows of seats is increased above that required by paragraph 54-8.7(e), the number of seats between aisles may be increased by one seat for each inch that such distance is increased; provided, however, that in no case shall there be more than ten seats in a row abutting an aisle on one end only.

(3) When the distance between rows of seats is increased above that required in paragraph 54-8.7(e), by an amount of eight inches, rows not exceeding forty-eight seats between aisles shall be permitted.

(c) Transverse Aisles.

(1) Transverse aisles leading to exits shall be provided at the rear of every seating level unless there are exits at the end of each longitudinal aisle.

(2) Transverse aisles shall be provided in all seating levels so that in no case shall there be a difference of level exceeding twelve feet between intermediate transverse aisles nor six feet from the lowest seat platform and a transverse aisle; provided, however, that in lieu of such transverse aisles there may be vomitories or other direct exits from each longitudinal aisle located at the same maximum difference of level.

(d) Width of Aisles.

(1) No aisle shall be less than thirty-six inches in width except that aisles with seats on one side only, and aisles serving not more than sixty seats, may have a minimum width of thirty inches.

(2) Transverse aisles shall have a minimum width of forty-four inches.

(3) Aisles shall be increased in width where necessary to provide a clear width at every point equal to eighteen inches for each 100 persons served. Such increase shall be cumulative in the direction of normal exit.

(e) Spacing of Rows.

(1) Rows of seats without backs shall be not less than twenty-eight inches apart measured from corresponding points of adjacent rows. Telescoping bleachers without backs shall be not less than twenty-four inches apart measured from corresponding points of adjacent rows.

(2) Rows of seats with backs shall be spaced not less than thirty-four inches apart, measured back to back except that such distance may be reduced to thirty-two inches when the thickness of the back does not exceed three-fourths inch.

[Amend. Coun. J. 5-28-58, p. 7799.]

54-8.8. (a) The facias of boxes, balconies, galleries and at the end of the aisles shall have substantial metal protective railings not less than thirty inches high above the floor. The railings at the foot of steps shall be not less than thirty-six inches high for the width of the steps.

(b) Cross-aisles, except where the backs of seats on the front of the aisles project twenty-four inches or more above the floor of the aisles, shall be provided with railings not less than twenty-six inches high.

(c) In balconies, galleries or other locations where seats are arranged on platforms or successive tiers, and the height of the rise from one platform to another below and in front of it exceeds twenty-one inches, a substantial railing not less than twenty-six inches high shall be placed at the edge of the platform along the entire row of seats.

54-8.9. Steps shall not be used in aisles where differences of level can be overcome by ramps having a grade of not more than one in eight. Where steps are used in aisles, such steps shall extend across the full width of aisles and shall be illuminated. Treads and risers shall be as required in chapter 67 of this code for exit stairs.

54-8.10. (a) There shall be not less than two exits from every part of a stage block.

(b) Exits from the stage floor level shall be located at opposite sides of the stage.

(c) One of the required exits from every gridiron shall extend to the roof of the stage block or to a doorway through the wall.

(d) Every stairway located within a stage block shall be constructed of non-combustible materials.

54-8.11. In places of public assembly where more than 200 seats are arranged in rows, the seats shall be securely fastened to the floor except as follows:

(a) Seats in boxes and railed-in enclosures having not more than fourteen seats.

(b) Temporary seating in a place of assembly secured together in units of not less than five seats.

54-8.12. Every floor above the second floor in a school for crippled children shall be served by an elevator or elevators with a floor area of at least four square feet per person, computed on the basis of a carrying capacity of all elevators sufficient to empty the school above the second floor in twenty minutes.

CHAPTER 55

OPEN AIR ASSEMBLY UNITS

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|---|---|

55-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an Open Air Assembly Unit as defined in section 48-5 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 51. *Height and Area Limitations.*

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-5. Sanitation Requirements.

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Section 67-3. Type of Exits.

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Section 67-6. Travel Distance to Exits.

Section 67-7. Width of Exits.

Section 67-8. Outside Exits.

Section 67-9. Doors.

Section 67-10. Stairs.

Section 67-11. Smokeproof Towers.

Section 67-12. Ramps.

Section 67-13. Horizontal Exits.

Section 67-16. Fire Escapes.

Section 67-17. Exit Lighting.

Section 67-18. Exit Signs.

Chapter 68. *Minimum Design Loads.*

Chapter 69. *Materials, Methods and Tests.*

Chapter 70. *Foundations.*

Chapter 71. *Masonry Construction.*

- Chapter 72. *Wood Construction.*
- Chapter 73. *Reinforced Concrete Construction.*
- Chapter 74. *Steel and Metal Construction.*
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- Chapter 80. *Heating.*
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55-2. An assembly unit shall be classified as an Open Air Assembly Unit when the structure, group of structures or part of a structure in or upon which persons assemble is open to the air on one or more sides for a horizontal distance equal to not less than $33\frac{1}{3}\%$ of its perimeter and for a height of not less than eight feet in each seating level or story.

55-3. Any part of an Open Air Assembly Unit that is enclosed and used for other than auxiliary purposes as provided in section 48-12.2, shall be considered as a mixed occupancy and shall comply with the requirements of section 48-12.

55-4. The capacity of an Open Air Assembly Unit shall be based on the actual number of fixed seats plus standing room space. Fixed seating shall be computed as the actual number of seats where divisions between seating are provided and at the rate of one foot six inches per person where no divisions are provided. Standing room space shall be computed at the rate of five square feet per person.

55-5. (a) Construction in which the structural elements are of wood or materials not more combustible than wood of dimensions conforming to the requirements of ordinary construction may be used subject to the following limitations:

(1) Capacity shall not exceed 2,500 persons.

(2) Height shall not exceed one story or one tier of seats. The vertical distance from the ground level to the highest row of seating shall not exceed thirty feet.

(3) When located less than sixty feet from an interior lot line or another building, the structure shall be enclosed with walls providing fire resistance of not less than two hours, except that such enclosure shall not be required for structures having an area not exceeding 800 sq. ft. and located not less than twenty feet from an interior lot line or another building.

(4) Structures shall not be located in Fire District No. 1.

(5) Structures shall not be located in Fire District No. 2 except when enclosed with walls providing fire resistance of not less than two hours.

(b) Construction in which the structural elements are of wood dimensions conforming to the requirements of heavy timber construction may be used subject to the following limitations:

(1) Capacity shall not exceed 10,000 persons.

OPEN AIR ASSEMBLY UNITS

(2) Height shall not exceed one story or one tier of seats. The vertical distance from the ground level to the highest row of seating shall not exceed thirty feet.

(3) When located less than twenty feet from an interior lot line, the structure shall be enclosed with walls providing fire resistance of not less than two hours.

(4) Structures shall not be located in Fire District No. 1 except when enclosed with walls providing fire resistance of not less than two hours.

(c) Construction in which all structural elements are of non-combustible materials shall not be limited as to capacity or height. When located less than twenty feet from an interior lot line, the structure shall be enclosed with walls providing fire resistance of not less than two hours.

55-6. Any hangar, paddock or stable which is a part of an Open Air Assembly Unit shall be located not less than sixty feet from any grandstand or bleachers.

55-7. Every Assembly Unit shall have frontage upon one or more open spaces consisting of streets not less than thirty feet wide or public alleys or other open spaces not less than ten feet wide which lead directly to a street. Frontage requirements shall be determined according to capacity and shall comply with requirements set forth in Table 55-7.

TABLE 55-7. REQUIRED FRONTAGE OF ASSEMBLY UNITS.

<i>Capacity</i>	<i>Frontage</i>	
	<i>On Street</i>	<i>On Street or other open space</i>
800 or less	One side	
801 to 2500	One side	One side
2501 to 5000	Two sides	
	One side	Two sides
5001 to 10,000	Two sides	One side
More than 10,000	Three sides	One side

55-8. Open Air Assembly Units shall comply with the fire protection requirements of chapter 62 where applicable except that the enclosures of stairways and other vertical shafts shall not be required.

55-9. Every Open Air Assembly Unit hereafter erected shall comply with the special fire-resistive requirements of sections 55-9.1 to 55-9.3, inclusive.

55-9.1. (a) All enclosed service spaces located within an assembly structure, including locker rooms, storage spaces, toilet rooms and similar uses, shall have walls, ceilings and floors of construction providing fire resistance of not less than one hour.

(b) Clubhouses and enclosed assembly rooms may be located only within assembly structures of non-combustible construction and shall be separated from the structure by construction providing fire resistance of not less than two hours.

(c) Garages and parking spaces for automobiles may be located only within assembly structures of non-combustible construction and shall be separated from the structure by construction providing fire resistance of not less than three hours and with no openings through such construction.

55-9.2. Projection booths shall comply with the requirements of section 54-6.6.

55-9.3. Any stage in an Open Air Assembly Unit shall comply with the requirements of section 54-6 as follows:

(a) **Proscenium Curtains and Stage Vents.** Proscenium curtains and stage vents shall not be required when there is a space in the front of the proscenium opening open to the sky for a distance of not less than sixty feet and any enclosure of the area for spectators does not exceed fifty per cent of the perimeter.

(b) **Stage Floors.** Stage floors may be entirely of wood construction if the stage does not exceed 1,000 square feet in area or if there is no trap space.

55-10. Every enclosed room or space in an Open Air Assembly Unit used for human occupancy shall be provided with a means of natural ventilation as required in section 66-3 unless a mechanical system of ventilation complying with the requirements of chapter 81 is provided.

55-11. Every Open Air Assembly Unit shall comply with the applicable requirements of chapter 67 and with the special requirements of sections 55-11.1 to 55-11.4, inclusive.

55-11.1. (a) Minimum Number of Exits.

The minimum number of exits from every seating level shall be not less than the following:

<i>Capacity</i>	<i>Number of Exits</i>
50 or less	1
51 to 1,000	2
1,001 to 4,000	3
More than 4,000	1 additional exit for every 4,000 persons or fraction thereof.

(b) **Width of Exits.** The aggregate width of exits shall be not less than eight inches for each 100 persons served. This minimum width shall be maintained throughout the structure through cumulative increases to the outside exit doorways or gateways.

55-11.2. All aisles and seating in Open Air Assembly Units shall comply with the following requirements:

(a) **Arrangement of Aisles.** Every aisle shall lead to an exit or to another aisle leading directly to an exit.

(b) **Location of Aisles.** In any seating space, the aisles shall be so located that there shall be not more than twenty seats in a row between adjacent aisles in a structure of ordinary construction or more than thirty such seats in a structure of heavy timber or non-combustible construction. The number of seats between any aisle and a railing or wall shall be not greater than one-half the allowable number of seats between aisles.

(c) **Width of Aisles.**

(1) No aisle shall be less than thirty-six inches in width except that aisles with seats on one side only and aisles serving not more than sixty seats may have a minimum width of thirty inches.

(2) Transverse aisles shall have a minimum width of forty-four inches.

(3) Aisles shall be increased in width where necessary to provide clear width at every point equal to seven inches for every 100 persons served. Such increase shall be cumulative in the direction of exit travel.

(d) **Transverse Aisles.** There shall be not more than twenty-four consecutive rows of seats between transverse aisles except that such transverse aisles shall not be required when there are vomitories or other means of direct exit from each longitudinal aisle, spaced not more than twenty-four rows apart.

55-11.3. Normal exits shall be connected by horizontal or vertical exit connections leading to an outside exit doorway or gateway, or to a field or other open space leading to an exit gateway. Turnstiles or similar devices shall not be considered as a required means of exit.

55-11.4. Every seat in an Open Air Assembly Unit shall be fastened securely in place with the following exceptions:

- (a) Boxes or loges containing not more than twenty seats.
- (b) Portable seats for spectators on ground level.

55-11.5. (a) Rows of seats without backs shall be not less than twenty-eight inches apart measured from corresponding points of adjacent rows. Telescoping bleachers without backs shall be not less than twenty-four inches apart measured from corresponding points of adjacent rows.

(b) Rows of seats with backs shall be spaced not less than thirty-four inches apart measured back to back except that such distances may be reduced to thirty-two inches when the thickness of the back does not exceed three-fourths inch.

[Amend. Coun. J. 5-28-58, p. 7799.]

55-12. (a) Solid curbs not less than four inches high and protective railings not less than three feet high constructed of non-combustible material shall be installed at every open side of every seating level which is more than two feet above grade.

(b) Any floor or seating space of an Open Air Assembly Unit, which has openings therein exceeding one inch in any dimension and which is above another floor occupied by the public, shall be protected with a guard of wire mesh or other non-combustible material.

CHAPTER 55.1

OPEN AIR DRIVE-IN THEATERS

- | | |
|-------------------------------|-------------------------------------|
| 55.1- 1. Definitions | 55.1-13. Enclosures |
| 55.1- 2. General requirements | 55.1-14. Box office |
| 55.1- 3. Location | 55.1-15. Dressing rooms |
| 55.1- 4. Traffic movement | 55.1-16. Drinking fountains |
| 55.1- 5. Grading and roadways | 55.1-17. Entrance requirements |
| 55.1- 6. Ramps and stalls | 55.1-18. Auditorium requirements |
| 55.1- 7. Loud speaker system | 55.1-19. Alarm system |
| 55.1- 8. Screen tower | 55.1-20. Exit requirements |
| 55.1- 9. Electrical wiring | 55.1-21. Illumination |
| 55.1-10. Concession stands | 55.1-22. Exit signs |
| 55.1-11. Toilet facilities | 55.1-23. Standard directional signs |
| 55.1-12. Projection rooms | |

55.1-1. For the purposes of this chapter, certain terms are defined as follows:

Aisle. An area of ground laid out in straight or curved rows, providing for the systematic and designated parking of cars.

Auditorium Area. A separate area used exclusively for the actual exhibition of motion pictures to patrons seated in the interior of cars which are specially arranged and parked in this area.

Box Office. A building used for the sale of admission tickets.

Bunkers. Concrete dividers which separate the ramp area into individual parking spaces.

Concession Building. An enclosed structure located in the auditorium area used for the sale of food, soft drinks, candy, cigarettes, ice cream or popcorn.

Drive-in Theater. A commercial enterprise devoted to the exhibition of sound motion picture films to be viewed by patrons seated in the interiors of automobiles parked in an open air auditorium. The enterprise shall consist of a geographical area divided into three sections:

(a) an Entrance-way and Hold-out area, commonly known as the lobby area;

(b) an Auditorium area, where motion pictures are exhibited to the patrons;

(c) an Exit area where cars gather upon leaving the auditorium area preliminary to merging onto public highways.

Entrance. An opening provided onto a roadway leading from the public highway into the entrance area.

Exit. An opening provided from the open air drive-in theater onto the public highway.

Exit Area. A separate area used exclusively for the parking or holding of cars exiting or breaking from the auditorium area awaiting passage onto the public highway.

Hold-out Area. A separate area used exclusively for the parking of cars awaiting admittance into the auditorium area of the theater.

Ramp. A curved aisle of stalls with various elevations and inclines, which provides an elevated area where cars may be parked in individual stalls.

Roadways. Passages lying between the ramps and aisles; also interconnecting passageways throughout the open air drive-in theater.

Screen Building. A structure on which one smooth flat surface of one side is used as the screen surface upon which the motion picture is exhibited.

Speaker Stand. A pipe or post mounted into the concrete bunkers and connected with a carriage or junction box attached to the top of the post for use in the sound system. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-2. Every open air drive-in theater or part thereof hereinafter designed, altered, erected, converted or used initially for the purposes of an open air drive-in theater shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-3. No part of any open air drive-in theater shall be located closer than two thousand feet to the boundary of any district zoned for residential use.

Every such theater shall be located so that at least one corner thereof will be on the corner of two intersecting streets or highways, each of which shall be not less than forty feet wide from curb line to curb line. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-4. Such theater shall be so constructed as to permit only one-way traffic within the boundaries of the theater. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-5. The surface coating throughout the entire open air drive-in theater shall be an impervious smooth surface coating of material and consistency to conform to standards set by the city of Chicago in the surface construction of its streets. The amount and type of stone and rock material used as the base of the entire theater ground area shall be of sufficient strength and depth to support the seal and grade conformity of the impervious coating.

The general grade of the entire theater area must be the same as that of the highways surrounding the theater so that there shall be no incline or decline either upon the entrancing or exiting of any cars. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-6. The incline of the ramps used for the parking of cars in the auditorium area shall not exceed twelve inches in height from the general grade of the theater area to the high point or crest of the ramp.

In the auditorium area the ramps shall be divided into a series of stalls or parking sections providing equally divided spaces or stalls of a minimum width of twelve feet and a minimum length of eighteen feet from each individual car.

Individual spaces or stalls shall be separated or divided by incorporating into the ramps a series of concrete constructed bunkers, having minimum measurements of sixteen feet in length, eighteen inches in width or thickness, and twelve inches in height—from ground level.

Concrete bunkers shall also be constructed to follow the contour or curvature of the respective ramp incline so that the minimum height of the bunker of twelve inches shall be maintained above ground level.

Concrete bunkers shall be securely anchored into the ground.

There shall be incorporated into the two sides, the front, and the rear of the concrete bunkers a system of ground level surface lighting which shall emanate solely from lens covered incandescent lamps mounted in light receptacles in accordance with section 55.1-21. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-7. Individual in-the-car type loud speakers shall be used exclusively.

Bunkers shall be so constructed to accommodate such speaker system, consisting of the post, the carriage, the junction box and two such speakers, but only alternate bunkers need have speaker stalls installed, thus providing one individual loud speaker for each parked car. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-8. The screen building shall have dimensions no greater than seventy feet in height and sixty feet in width, constructed in its entirety of non-com-

bustible material, the structural strength and design of which must be capable of withstanding the maximum recorded wind pressure of the area and in no event less than fifty pounds to the square foot, and must conform in all other respects to the general provisions of this code relating to buildings.

The screen tower shall be so located on the geographical plan of the theater and so constructed that no part of the side upon which the motion picture is exhibited shall be visible to any automobile traffic on any public highway or public street. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-9. All outdoor electrical wiring for light, power and sound shall be lead-covered cable, installed underground, and in all other respects shall conform to the general provisions of this code relating to buildings and electrical installations. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-10. Concession stands or buildings shall be fabricated and constructed entirely of non-combustible building material, and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-11. Toilet rooms shall be constructed in their entirety of non-combustible building materials and shall conform in all other respects to the general provisions of this code relating to buildings.

Separate toilet rooms for males and females shall be located within a maximum distance of two hundred feet from every car located in the entire area of the theater. The horizontal distance necessary to be traveled by any patron in reaching a toilet room for either sex shall not exceed two hundred feet in any case, and all toilet rooms shall be located within the perimeter of the theater area and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-12. Projection rooms shall be separate and distinct buildings, constructed entirely of non-combustible building materials, and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-13. The perimeter of the entire open air drive-in theater area shall be enclosed by an open wire type fence (cyclone type or approved equal) with a minimum height of eight feet. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-14. The box office shall be a separate and distinct building, so located in the entrance area to prevent traffic congestion, and constructed in its entirety of non-combustible building material, and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-15. Employees' dressing rooms shall be separate and distinct buildings, located within the perimeter of the theater area and within convenient distance of the post of employment. They shall be constructed of non-combustible building materials and shall be furnished with ample toilet facilities and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-16. Every open air drive-in theater shall be provided with public drinking fountains which shall be located conveniently for use of all patrons of the theater.

No drinking fountain shall be installed in any toilet room [Added. Coun. J. 5-3-50, p. 6213.]

55.1-17. Each theater area shall contain an entrance and a holdout or lobby area apart from the auditorium section of the theater. The car capacity of this area shall not exceed the car capacity of the auditorium area. This hold-out or lobby area shall provide a space for those cars waiting to be admitted to the following show after the exiting of cars occupying the auditorium area. This hold-out area shall be located in a separate section of the theater and shall be used only for those cars waiting for admission into the auditorium area, and shall be obstructed from any of the features visible and audible in the auditorium area.

Cars shall be arranged and parked in the lobby area in a systematic and orderly manner so that there will be provided for each individual car a clearly marked space or stall with minimum dimensions of twelve feet in width and twenty-two feet in length. These open spaces or stalls shall be arranged one next to another in a system of aisles. In addition there shall be provided an ample roadway with a minimum width of thirty feet between each aisle leading in one direction to the emergency exits, and in the opposite direction to the auditorium area.

Every such theater shall provide a minimum of two entrances and two exits, of which one entrance and one exit shall be located on each abutting street or highway.

All entrances shall be so designed and constructed as to permit only right turns off abutting highways, and in no event shall entrance be allowed by means of left turns. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-18. The auditorium area shall be constructed in a system of ramps or aisles, with various elevations or inclines arranged so that each car in its respective ramp or aisle is on the proper incline facing the screen tower where the motion picture is exhibited, or so that the patrons in each car have a clear and unobstructed view of the screen tower. The maximum car capacity of this area shall not exceed 750 cars.

There shall be provided roadways between the ramps of a minimum width of thirty feet. These ramps shall be divided into a series of single car unit stalls separated from one another by electrically illuminated concrete bunkers or stall dividers.

Concrete bunkers shall be placed on thirteen foot six inch centers, providing a space of twelve feet in width between the bunkers for one automobile only. These bunkers, or stall dividers, shall be a minimum of sixteen feet in length, and eighteen inches in thickness or width, and twelve inches in height above ground level.

There shall be installed in each side of each bunker lens covered incandescent lamps mounted in light receptacles in accordance with the provisions of section 55.1-21. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-19. There shall be provided an approved electrical alarm system in every open air drive-in theater auditorium area.

There shall be provided a push button or similar signaling device incorporated into each speaker stand which is adjacent to and conveniently located to each automobile. The signal device shall be connected to an electrically lighted visual and audible alarm system located at one end of each ramp or aisle. The alarm system shall be so designed and constructed that when the signal device is operated at any speaker stand it will immediately set off the electrically lighted visual and audible alarm and indicate upon the alarm device the exact source of the signal and it is required as a component part of the alarm device there shall be provided an instrument so constructed as to designate the exact source of the alarm or the location of the speaker stand from which the signal was operated. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-20. An exit shall be located at the end of every ramp to allow traffic to merge into the exit area. The maximum distance to the nearest exit shall in no case exceed 400 feet.

The car capacity of the exit area shall not exceed the car capacity of the auditorium area. The exit area shall be located in a separate section of the theater and shall be used only for those cars waiting to be merged on to the public highway and shall be obstructed from any of the features visible and audible in the auditorium area.

No exit shall exceed twelve feet in width. All exit traffic shall merge on to and move in the same direction of the normal highway traffic on that side of the highway which abuts the perimeter of the theater. No traffic therefrom shall be permitted to cross over the center line of the highway. No left hand turns on to the highway shall be permitted. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-21. Artificial illumination shall be provided as follows:

Hold-out Area: Over-head lighting emanating from a system of incandescent flood lamps mounted on poles and so arranged to provide a minimum intensity of one foot candle of light at ground level. Flood lamps shall be mounted at a minimum height of fifty feet above grade.

All electrical wiring shall be installed in accordance with section 55.1-9.

Auditorium Area: Ground level surface lighting emanating solely from lens covered incandescent lamps mounted in light receptacles incorporated in the sides, front and rear of the bunkers on a minimum of two foot centers not more than ten feet above ground or surface level. Lamps shall be of sufficient wattage to provide a minimum and constant diffusion of light intensity of no less than three foot candles at all points at ground or surface level within the stall area, and two foot candles at all points at ground or surface level in the roadways.

All electrical wiring shall be installed in accordance with section 55.1-9.

Exit Area: Over-head lighting which shall emanate from a system of incandescent flood lamps mounted on poles at a minimum height of fifty feet above grade and so arranged as to provide a minimum intensity of one foot candle of light at ground level.

All electrical wiring shall be installed in accordance with section 55.1-9. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-22. Exit signs shall be erected and illuminated in such a manner as to be visible from all points in the hold-out area, the auditorium area and the exit area. Exit lighting shall be installed on an emergency electrical wiring system and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

55.1-23. Standard directional signs shall be mounted and illuminated by electricity so as to provide a minimum intensity of light upon the surface of the sign of five foot candles and shall conform in all other respects to the general provisions of this code relating to buildings. [Added. Coun. J. 5-3-50, p. 6213.]

CHAPTER 56

BUSINESS UNITS

56-1. General requirements

56-2. Ventilation of intermediate offices

56-1. Every building or part of a building hereafter designed, erected, altered or converted for the purpose of a Business Unit as defined in section 48-6 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 49. *Classification of Buildings by Construction Type.*

Chapter 50. *Location Limitations.*

Section 50-2. Location on Property.

Sections 50-3, 50-4, 50-5. Limitations within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Sections 62-3, 62-4, 62-5. Enclosures Required.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-2. Natural Lighting.

Section 66-3. Natural Ventilation.

Section 66-5. Sanitation Requirements.

Chapter 67. *Exit Requirements.*

Section 67-3. Types of Exits.

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Section 67-5. Arrangement and Location of Exits.

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- Chapter 68. *Minimum Design Loads.*
- Chapter 69. *Materials, Methods and Tests.*
- Chapter 70. *Foundations.*
- Chapter 71. *Masonry Construction.*
- Chapter 72. *Wood Construction.*
- Chapter 73. *Reinforced Concrete Construction.*
- Chapter 74. *Steel and Metal Construction.*
- Chapter 75. *Safety Requirements.*
- Chapter 76. *Safeguards During Construction.*
- Chapter 77. *Use of Public Property.*
- Chapter 78. *Existing Buildings.*
- Chapter 79. *Elevators.*
- Chapter 79.1. *Warm Air Heating Plants.*
- Chapter 80. *Heating.*
- Chapter 81. *Ventilation.*
- Chapters 82, 83, 162. *Plumbing.*
- Chapters 86, 87, 88. *Electrical Requirements.*

56-2. (a) Definition. An intermediate office is a room or space used for business purposes enclosed by partitions and having no direct openings to the outside air for natural ventilation.

(b) Natural Ventilation. Except when mechanical ventilation is provided, intermediate offices shall be provided with natural ventilation as herein required.

(1) An intermediate office shall have doors or other openings of not less than fifteen per cent of the floor area of the intermediate office opening into a room or space having a direct source of natural ventilation. The area of such direct source of natural ventilation shall comply with the requirements of section 66-3 applied to the combined floor areas.

CHAPTER 57

MERCANTILE UNITS

57-1. General requirements

57-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a Mercantile Unit as defined in section 48-7 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 49. *Classification of Buildings by Construction Type.*

Chapter 50. *Location Limitations.*

Section 50-2. Location on Property.

Sections 50-3, 50-4, 50-5. Limitation within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Sections 62-3, 62-4, 62-5. Enclosures Required.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-3. Natural Ventilation.

Section 66-5. Sanitation Requirements.

Chapter 67. *Exits.*

Section 67-3. Types of Exits.

Section 67-4. Minimum Number of Exits.

Section 67-5. Arrangement and Location of Exits.

Section 67-6. Travel Distance to Exits.

Section 67-7. Width of Exits.

Section 67-8. Outside Exits.

Section 67-9. Doors.

Section 67-10. Stairs.

Section 67-11. Smokeproof Towers.

Section 67-12. Ramps.

Section 67-13. Horizontal Exits.

Section 67-14. Escalators.

Section 67-15. Exterior Stairs.

Section 67-16. Fire Escapes.

Section 67-17. Exit Lighting.

Section 67-18. Exit Signs.

Chapter 68. *Minimum Design Loads.*

Chapter 69. *Materials, Methods and Tests.*

Chapter 70. *Foundations.*

Chapter 71. *Masonry Construction.*

Chapter 72. *Wood Construction.*

Chapter 73. *Reinforced Concrete Construction.*

Chapter 74. *Steel and Metal Construction.*

Chapter 75. *Safety Requirements.*

Chapter 76. *Safeguards During Construction.*

Chapter 77. *Use of Public Property.*

Chapter 78. *Existing Buildings.*

Chapter 79. *Elevators.*

Chapter 79.1. *Warm Air Heating Plants.*

Chapter 80. *Heating.*

Chapter 81. *Ventilating.*

Chapters 82, 83, 162. *Plumbing.*

Chapters 86, 87, 88. *Electrical Requirements.*

CHAPTER 58

INDUSTRIAL UNITS

58-1. General requirements

58-2. Power plants

58-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of an Industrial Unit as defined in section 48-8 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to, the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 49. *Classification of Buildings by Construction Type.*

Chapter 50. *Location Limitations.*

Section 50-2. Location on Property.

Sections 50-3, 50-4, 50-5. Limitations within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Sections 62-3, 62-4, 62-5. Enclosures Required.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-3. Natural Ventilation.

Section 66-5. Sanitation Requirements.

Chapter 67. *Exit Requirements.*

Section 67-3. Types of Exits.

Section 67-4. Minimum Number of Exits.

Section 67-5. Arrangement and Location of Exits.

Section 67-6. Travel Distance to Exits.

Section 67-7. Width of Exits.

Section 67-8. Outside Exits.

Section 67-9. Doors.

Section 67-10. Stairs.

Section 67-11. Smokeproof Towers.

- Section 67-12. Ramps.
- Section 67-13. Horizontal Exits.
- Section 67-14. Escalators.
- Section 67-15. Exterior Stairs.
- Section 67-16. Fire Escapes.
- Section 67-17. Exit Lighting.
- Section 67-18. Exit Signs.

- Chapter 68. *Minimum Design Loads.*
- Chapter 69. *Materials, Methods and Tests.*
- Chapter 70. *Foundations.*
- Chapter 71. *Masonry Construction.*
- Chapter 72. *Wood Construction.*
- Chapter 73. *Reinforced Concrete Construction.*
- Chapter 74. *Steel and Metal Construction.*
- Chapter 75. *Safety Requirements.*
- Chapter 76. *Safeguards During Construction.*
- Chapter 77. *Use of Public Property.*
- Chapter 78. *Existing Buildings.*
- Chapter 79.1. *Warm Air Heating Plants.*
- Chapter 80. *Heating.*
- Chapter 81. *Ventilation.*
- Chapters 82, 83, 162. *Plumbing.*
- Chapters 86, 87, 88. *Electrical Requirements.*

58-2. The following special requirements shall be applicable to one-story structures of Type II construction used exclusively for the production and distribution of electricity, gas or steam, or for low hazard industrial processes where special height is required to accommodate craneways or installation of processing machinery or equipment.

(a) Such structures shall be exempt from height limitations in feet and area limitations established in sections 51-1.2 and 51-2.2.

(b) Mezzanine floors having an area not exceeding two-thirds of the main floor area shall be permitted.

(c) Exterior walls located less than thirty feet from an interior lot line or another building and exceeding forty-five feet in height shall be of construction providing fire resistance of not less than two hours.

CHAPTER 59

STORAGE UNITS

- | | |
|-------------------------------------|-------------------------------------|
| 59-1. General requirements | 59-3.6. Ventilation |
| 59-2. Ventilation requirements | 59-3.7. Exits |
| 59-3. Garages | 59-4. Hangars |
| 59-3.1. Definitions | 59-4.1. Definitions |
| 59-3.2. Location on property | 59-4.2. Location on property |
| 59-3.3. Construction | 59-4.3. Construction |
| 59-3.4. Height and area limitations | 59-4.4. Height and area limitations |
| 59-3.5. Heating | 59-4.5. Heating |

59-1. Every building or part of a building hereafter designed, erected, altered or converted for the purposes of a Storage Unit as defined in section 48-9 shall comply with the special provisions of this chapter and also with the general provisions of this code pertaining to buildings, including, but not limited to the following:

Chapter 48. *Classification of Buildings by Occupancy.*

Section 48-12. Mixed Occupancy.

Section 48-13. Occupancy Content.

Chapter 49. *Classification of Buildings by Construction Type.*

Chapter 50. *Location Limitations.*

Section 50-2. Location on Property.

Sections 50-3, 50-4, 50-5. Limitations within Fire Districts.

Chapter 51. *Height and Area Limitations.*

Section 51-1. Height Limitations.

Section 51-2. Area Limitations.

Section 51-3. Mixed Occupancy.

Chapter 62. *Fire-Resistive Requirements.*

Section 62-1. Fire Walls.

Section 62-2. Exterior Walls.

Sections 62-3, 62-4, 62-5. Enclosures Required.

Section 62-6. Partitions.

Section 62-7. Exterior Trim.

Section 62-8. Roof Coverings.

Section 62-9. Interior Wall and Ceiling Finish and Trim.

Section 62-10. Flooring.

Section 62-11. Roof Structures.

Section 62-12. Firestopping.

Chapter 63. *Chimneys, Flues and Vents.*

Chapter 64. *Fire Extinguishing Apparatus.*

Chapter 65. *Fire-Resistive Materials and Construction.*

Chapter 66. *Light, Ventilation and Sanitation.*

Section 66-3. Natural Ventilation.

Section 66-5. Sanitation Requirements.

Chapter 67. *Exit Requirements.*

Section 67-3. Types of Exits.

Section 67-4. Minimum Number of Exits.

Section 67-5. Arrangement and Location of Exits.

- Section 67-6. Travel Distance to Exits.
- Section 67-7. Width of Exits.
- Section 67-8. Outside Exits.
- Section 67-9. Doors.
- Section 67-10. Stairs.
- Section 67-11. Smokeproof Towers.
- Section 67-12. Ramps.
- Section 67-13. Horizontal Exits.
- Section 67-15. Exterior Stairs.
- Section 67-16. Fire Escapes.
- Section 67-17. Exit Lighting.
- Section 67-18. Exit Signs.

- Chapter 68. *Minimum Design Loads.*
- Chapter 69. *Materials, Methods and Tests.*
- Chapter 70. *Foundations.*
- Chapter 71. *Masonry Construction.*
- Chapter 72. *Wood Construction.*
- Chapter 73. *Reinforced Concrete Construction.*
- Chapter 74. *Steel and Metal Construction.*
- Chapter 75. *Safety Requirements.*
- Chapter 76. *Safeguards During Construction.*
- Chapter 77. *Use of Public Property.*
- Chapter 78. *Existing Buildings.*
- Chapter 79. *Elevators.*
- Chapter 79.1. *Warm Air Heating Plants.*
- Chapter 80. *Heating.*
- Chapter 81. *Ventilation.*
- Chapters 82, 83, 162. *Plumbing.*
- Chapters 86, 87, 88. *Electrical Requirements.*

59-2. (a) Storage areas where persons enter for limited periods of time need not be provided with any system of ventilation.

(b) Storage areas occupied by persons for prolonged periods of time shall be provided with openings to the outside air of not less than two per cent of the floor area or with a system of mechanical ventilation.

59-3. Every garage hereafter erected shall comply with all applicable provisions of this code pertaining to Moderate Hazard Storage Units and with the special provisions of sections 59-3.1 to 59-3.7, inclusive.

59-3.1. (a) Garage. Except for private garages, a building or part of a building designed or used for the display, shelter, storage or servicing of motor vehicles containing flammable fuel, except parking facilities as defined in section 61-20.1.

(b) Basement Garage. A garage having its floor level more than one foot below grade shall be designated as a basement garage.

(c) Loading Spaces and Driveways. Loading spaces and driveways designed or used for the parking or storage of motor vehicles and extending more than five feet into a building shall be classified as Garages. Loading spaces and driveways classified as auxiliary uses under section 48-12.2 shall not be classified as garages.

(d) **Parking Lot.** A premises, enclosure or other place where two or more motor vehicles are stored or parked for hire, not within a building, in a condition ready for use, where rent or compensation is paid to the owner, manager or lessee of the premises for the storing, sheltering, keeping or maintaining of such motor vehicles.

[Amend. Coun. J. 6-14-50, p. 6471; 3-14-57, p. 4430; 5-28-58, p. 7797; 11-7-58, p. 8380.]

59-3.2. (a) Every garage having an area exceeding 16,000 square feet shall have one side fronting on a street or public way not less than thirty feet wide and shall have one other side fronting on an open unobstructed space not less than ten feet wide leading to a public way.

(b) *Buildings on Parking Lots.* Buildings on parking lots, for office or service purposes shall be in conformity with the applicable provisions of the building code for buildings of such class. No part of the ground area of such building shall be nearer to the front street line than a distance, determined by the commissioner of streets and electricity, after a traffic engineering survey, to be adequate to prevent traffic congestion on the abutting street. [Amend. Coun. J. 6-14-50, p. 6471.]

59-3.3. (a) Construction shall comply with requirements of chapter 49 and chapter 51 applying to Storage Units except that in garages of any type of construction all floors and ramps accessible to motor vehicles and all structural members supporting such floors shall be of Type I-A construction.

(b) When a basement is provided in a garage building, the floor construction over the basement and all structural members supporting such floor construction shall be of Type I-A construction.

59-3.4. Height and area limitations shall comply with sections 51-1 and 51-2.

59-3.5. (a) *Enclosures.* Heating plants, other than approved direct-fired unit heaters, shall be separated from all garage space by walls providing fire resistance of not less than four hours and by floors and ceilings providing fire resistance of not less than two hours. Openings in walls except as required for pipes and ducts shall be limited to one means of access which shall be through a vestibule protected on each side with a self-closing Class A fire door.

(b) *Equipment.* Except as provided in paragraphs (c) and (d), garage heating shall be by means of radiation or convection from hot water, vapor, or steam heating systems of which the boilers or devices containing combustion chambers and the fuel storage spaces shall be separated from every garage space as required in paragraph (a).

(c) *Gas or Oil Unit Heaters.* Gas fired or oil fired unit heaters, subject to the following provisions, shall be permitted in garages:

(1) The flames shall be protected from draughts of air and contact with combustible materials.

(2) Unit heaters shall be so installed that the bottom of the heater shall not be less than eight feet above the floor. They shall be constructed and arranged to conform to the requirements of the "Recommended Good Practice Requirements of the National Board of Fire Underwriters for the Construction and Protection of Garages, N.B.F.U. Pamphlet No. 88, 1939."

(3) Direct-fired unit heaters specifically approved for use in garages in the "List of Inspected Gas, Oil, and Miscellaneous Appliances, Underwriters' Laboratories, Inc., November, 1956", shall be considered acceptable under the provisions of this section.

(d) *Electric Unit Heaters.* Electric unit heaters constructed and installed to conform to the Underwriters' Laboratories, Inc., "Standard for Electric Heating Appliances", Fourth Edition, May 1940, shall be permitted in garages. [Amend. Coun. J. 3-14-57, p. 4430.]

59-3.6. Garages shall be provided with mechanical ventilation complying with the requirements of chapter 81.

59-3.7. Pedestrian exits shall be provided complying with the requirements of chapter 67, applying to Storage Units, except that a vehicle ramp may be substituted for not more than one required means of vertical exit and one vehicle door may be substituted for not more than one exterior exit door.

59-4. Every hangar hereafter erected shall comply with all applicable provisions of this code pertaining to Moderate Hazard Storage Units and with the special provisions of sections 59-4.1 to 59-4.4, inclusive.

59-4.1. (a) Hangar. A building or part of a building designed or used for the shelter, storage or servicing of one or more aircraft.

(b) Aircraft Sales and Display Rooms. Rooms used for the display or sale of aircraft containing no flammable liquid during such sale or display shall be classified as Mercantile Units.

59-4.2. Location of hangars shall comply with the requirements applying to garages as provided in section 59-3.2.

59-4.3. (a) The type of construction required for any hangar shall be determined by height and area limitations as established in section 59-3.4.

(b) In a hangar of any type of construction, all floors or ramps accessible to aircraft and all structural members supporting such floors shall be of Type I-A construction.

(c) Floors of hangars shall be not less than three inches above grade.

(d) No basement shall be permitted under any hangar except as required for a heating plant separated from the hangar as provided in section 59-3.5.

59-4.4. No hangar shall be hereafter erected or altered to exceed the maximum allowable heights and areas established in Table 59-4.4.

TABLE 59-4.4. MAXIMUM ALLOWABLE HEIGHTS AND AREAS
OF HANGARS.

<i>Construction Type</i>	<i>Maximum Height</i>		<i>Maximum Area Sq. Ft.</i>
	<i>Stories</i>	<i>Feet</i>	
I-A	4	100	40,000
I-B	2	50	35,000
I-C	1	50	30,000
II	1	50	25,000
III-A	1	50	20,000
III-B	1	50	15,000
III-C	1	50	10,000
IV-A	1	50	8,000
IV-B	1	50	5,000

Floor areas may be increased to two times the areas established in Table 59-4.4 when the building is equipped throughout with an approved automatic sprinkler system.

59-4.5. Heating of hangars shall comply with the requirements of section 59-3.5 governing heating of garages.

CHAPTER 60

HAZARDOUS USE UNITS

General Provisions

- 60- 1. Code requirements
- 60- 2. Definitions
- 60- 3. Types of occupancies
- 60- 4. Classification of occupancies
- 60- 5. Location near hospitals and assembly places
- 60- 6. Lot occupancy
- 60- 7. Court requirements

Safety Clearances

- 60- 8. Definition
- 60- 9. Dry cleaning buildings
- 60-10. Flammable liquid tanks above ground
- 60-11. Flammable liquid distilling and condensing plants
- 60-12. Flammable liquids buildings
- 60-13. Fume or explosion hazard buildings
- 60-14. Grain bleachers
- 60-15. Grain elevators and malt houses
- 60-16. Hazardous chemical storage buildings
- 60-17. Magazines
- 60-18. Nitrocellulose buildings

Construction

- 60-19. Interior doorways
- 60-20. Standard fireproof cabinet
- 60-21. Standard fireproof vault
- 60-22. Asphalt, tar, pitch, and resin heating rooms
- 60-23. Cereal, feed, flour, grist, and starch mills
- 60-24. Corrosive acid storage buildings
- 60-25. Dry cleaning buildings
- 60-26. Fume or explosion hazard buildings
- 60-27. Fume or explosion hazard room
- 60-28. Grain bleachers
- 60-29. Grain elevators and malt houses
- 60-30. Grinding, dust producing, Japanning, enameling, paint mixing or spraying rooms
- 60-31. Hazardous chemical rooms
- 60-32. Hazardous chemical storage vaults
- 60-33. Hazardous chemical storage buildings
- 60-34. Flammable material storage buildings
- 60-35. Flammable material storage rooms
- 60-36. Lumber dry kilns
- 60-37. Magazines
- 60-38. Motion picture trial exhibition rooms
- 60-39. Nitrocellulose buildings
- 60-40. Nitrocellulose rooms

- 60-41. Nitrocellulose products buildings
- 60-42. Nitrocellulose products rooms
- 60-43. Picker or shredder rooms
- 60-44. Manufactured gas buildings
- 60-45. Special drying rooms having hazardous vapors
- 60-46. Rooms for handling waste paper
- 60-47. Service or filling stations
- 60-48. Smoke houses and smoke rooms
- 60-49. Portable smoke rooms
- 60-50. Standard drying rooms
- 60-51. Special room for flammable liquids
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- 60-56. Unlimited fire areas
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- 60-58. Asphalt, tar, resin heating
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- 60-63. Nitrocellulose products rooms
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Multiple Use Buildings

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Windows and Ventilation

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- 60- 79. Standard fireproof cabinet
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- 60- 81. Dry cleaning rooms
- 60- 82. Flammable liquids
- 60- 83. Fume or explosion hazard rooms

- 60- 84. Hazardous chemical, grind-
ing or dust producing
rooms
- 60- 85. Japanning, enameling, paint
mixing or spraying rooms
- 60- 86. Material heating rooms,
highly flammable storage
rooms, picker or shredder
rooms
- 60- 87. Motion picture trial exhibi-
tion rooms
- 60- 88. Nitrocellulose products
rooms
- 60- 89. Special drying rooms

Equipment

- 60- 90. General requirements
- 60- 91. Conveyors and ducts
- 60- 92. Grounding
- 60- 93. Electrical apparatus
- 60- 94. Open fires and lights
- 60- 95. Piping through special
rooms
- 60- 96. Directional signs
- 60- 97. Rooms for flammable liquids
- 60- 98. Dip tanks for flammable
liquids
- 60- 99. Pipes for flammable liquids
- 60-100. Relief valves for flammable
liquids
- 60-101. Filling pipe and hose for
flammable liquids
- 60-102. Flammable liquid containers
- 60-103. Flammable liquid reclaimers
and recovery systems
- 60-104. Gasoline gauging or vending
devices
- 60-105. Dry cleaning buildings
- 60-106. Drying rooms
- 60-107. Grain bleachers
- 60-108. Grinding and dust- produc-
ing rooms

- 60-109. Japanning and enameling
ovens
- 60-110. Lumber dry kilns
- 60-111. Nitrocellulose products
rooms
- 60-112. Paint mixing, spraying,
picker or shredder rooms
- 60-113. Motion picture exhibition
rooms
- 60-114. Smoke houses and smoke
rooms

Danger Signs

- 60-115. Fume or explosion hazard
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materials
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or shredder room

Fire Protection

- 60-120. General requirements
- 60-121. Automatic sprinklers
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liquids
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Artificial Lighting and Exit Signs

- 60-131. General requirements
- 60-132. Artificial lighting
- 60-133. Exit signs
- 60-134. Standard fireproof vaults

60-1. Every building, or part of a building, hereafter designed, erected, altered or converted for the purposes of a hazardous use unit shall comply with the general provisions in this code pertaining to buildings and in addition shall comply with the special provisions of this chapter. The requirements of this code shall apply to any hazardous use units used for industrial or storage purposes, except as otherwise provided in this chapter. Every existing building having an occupancy which would be classed as a hazardous use unit by the building provisions of this code shall be so classified with respect to any additions, increase in capacity, or alteration thereof, and shall conform to the provisions of this chapter and of chapter 78 for existing buildings and structures.

60-2. The following terms used in this chapter are hereby defined as follows:

Corrosive acid storage building. A building, or part of a building, designed, intended or used for no purposes other than that of the storage of hydrochloric acid, nitric acid, sulphuric acid, hydrofluoric acid or any other corrosive acid.

Dry cleaning building. A building, or part of a building, designed, intended or used for no purpose other than the purpose of dry cleaning or spotting as defined in chapter 121 of this code.

Dry cleaning room. A room for the purpose of carrying on dry cleaning process in a dry cleaning building.

Explosives. Any chemical compounded or mechanical mixture which is commonly used or intended for the purpose of producing an explosion, or which contains any oxidizing and combustible units, or other ingredients, in such proportions, quantities or packing that an ignition by fire, by friction, by concussion, by percussion or by detonator of any part of the compound or mixture may cause such a sudden generation of highly heated gases that the resultant gaseous pressures will be capable of producing destructive effects on contiguous objects or of destroying life or limb and shall include articles subdivided as follows:

(a) Unlawful explosives. Any liquid nitroglycerin, any high explosive containing more than sixty per cent of nitroglycerin, any high explosive which permits the leakage of nitroglycerin under any conditions; any nitrocellulose in a dry condition in a quantity of more than ten pounds in one exterior package; any fulminate of mercury in a dry condition; any fulminate of other metals in any condition except as a component of articles not otherwise prohibited; any fireworks which combine an explosive and a detonator or any fireworks prohibited by the laws of the state or by other sections of this code. No person shall have, keep or use any of these unlawful explosives within the city.

(b) Authorized explosives. Black powder high explosives not otherwise prohibited by the foregoing subparagraph, blasting caps, smokeless powder, wet fulminate of mercury, ammunition for cannon and small arms, explosive projectiles, railway torpedoes and flares, marine and highway flares, detonating fuses, primers, fuses and safety squibs. Such explosives may be stored or used in accordance with the provisions of this code.

Fireworks. Any fireworks which are intended to be used for any public display or private use not otherwise prohibited by the laws of the state or any ordinances of the city.

Flammable liquids. All flammable liquids shall be divided into four classes according to the flash point as follows:

Class I. Liquids with flash point below twenty-five degrees Fahrenheit, four degrees below zero Centigrade, closed cup tester.

Class II. Liquids with a flash point above that for class I and below seventy degrees Fahrenheit, twenty-one degrees Centigrade, closed cup tester.

Class III. Liquids with a flash point above that for Class II and below one hundred eighty-seven degrees Fahrenheit, eighty-six degrees Centigrade.

Class IV. Liquids with a flash point above that for Class III, the flash points shall be as determined with testers approved by the bureau of fire prevention, but the cup tester, standardized by the United States bureau of standards shall be authoritative in case of dispute. All tests shall be made in accordance with the methods approved by the bureau of fire prevention. Flammable liquids shall include:

Class I.

Ether.
Carbon Bisulphide.
Gasoline.
Naphtha.
Benzol.
Collodion.
Acetone.
Liquefied Petroleum Gas.

Class III.

Kerosene.
Amyl Alcohol.
Turpentine.
Fuel Oil.
Whiskey.

Class II.

Alcohol.
Amyl Acetate.
Toluol.
Ethyl Acetate.
Methyl Acetate.

Class IV.

Petroleum.

Any fluid, manufactured liquid or fluid commodity, such as paint, varnish or lacquer, dryer, or cleaning solution or polishing liquid which contains flammable liquid shall be classed in accordance with this section according to the flash point of the mixture.

Flammable liquid container. Any can, bucket, barrel, tank or other vessel in which flammable liquids are stored or kept for sale.

Fume or explosion hazard building, room and gases.

(a) Fume or explosion hazard building. A building, or part of a building, designed, intended or used for the purpose of manufacturing, compressing or storing any fume hazard gas or any explosion hazard gas, either at a pressure of more than fifteen pounds per square inch or in a quantity of more than twenty-five hundred cubic feet.

(b) Fume or explosion hazard room. A room designed, intended or used for any of the purposes described under the preceding paragraph and which is located in a building other than a fume or explosion hazard building.

(c) Fume hazard gases. Ammonia gas, chlorine gas, phosgene gas, sulphur dioxide gas and any other gas which, as determined by the committee on standards and tests, is in fact a poisonous irritant or corrosive gas and is not susceptible to fire or explosion, shall each be defined as a fume hazard gas.

(d) Explosion hazard gases, acetylene gas, ammonia gas, ether gas, ethyl chloride gas, ethylene gas, liquefied hydrocarbon gases, liquefied petroleum gases, hydrogen gas, illuminating gas, methyl chloride gas and any other gas which is a poisonous, irritant or corrosive gas and is also a gas susceptible to explosion under any condition or is not a poisonous, irritant or corrosive gas but is a gas susceptible to explosion under any condition shall each be defined as an explosion gas.

Grain elevator, malt house and similar building. A building designed, intended or used for the purpose of receiving, storing, delivering, working with or treating grain in bulk.

Grinding or dust producing room. A room containing a machine or device for grinding, pulverizing, buffing or polishing, which produces dust, lint, shavings or other fine particles of matter liable to spontaneous ignition or explosion, or a room in which it is proposed to install any such machine or device.

Hazardous chemical storage building. A building, or part of a building, designed, intended or used for no purpose other than that of the storage of any such chemical or material as named in the definition of "hazardous chemical room" in the following paragraph.

Hazardous chemical room. A room designed, intended or used for the purposes of storing or using aluminum powder, calcium carbide, calcium phosphide, metallic potassium, metallic sodium, phosphorous, sodium peroxide or any other chemical or material which, as determined by the committee on standards and tests will in fact, create an equally or more serious flame hazard, or an equally or more serious explosion hazard, or an equally or more serious flame and explosion hazard when coming in contact with water or moisture.

Highly flammable material storage building. A building, or part of a building, designed, intended or used for the purpose of storing hay, straw, broom corn, hemp, jute, sisal, moss, sawdust, other wood dust, shavings, excelsior, fiber, hair or any other similar material which involves an equally or more serious flame hazard.

Highly flammable material storage room. A room designed, intended or used only for the purposes described under the preceding paragraph, which is located in a building other than a highly flammable material storage building.

Highly hazardous material, product, article or substance. Any material, product, article or substance which is liable to burn with rapidity, or while burning to emit poisonous or noxious fumes or while burning to cause explosions.

Magazine. A building, or part of a building, designed, intended or used for the storage of an explosive or fireworks, other than building which is otherwise classified under this chapter.

(a) First-class magazine. Every magazine which contains more than one hundred pounds of explosives or fireworks and has a content of not more than twenty-five hundred pounds of explosives or fireworks.

(b) Second-class magazine. Every magazine of a size which will contain not more than one hundred pounds of explosives or fireworks.

Nitrocellulose. Any substance, material or compound composed in whole or in part of soluble cotton or similar tetra-nitrate or higher nitrate of cellulose, including pyroxylin, plastic, celluloid, fibroid, viscoloid, pyralin and all similar substances, materials and compounds, including both new and reclaimed substances.

Nitrocellulose building. A building, or part of a building, designed, intended or used for no purpose other than the nitration, manufacture or storage of nitrocellulose, or a building in which nitrocellulose is nitrated, or a building in which discarded scraps of nitrocellulose are reclaimed.

Nitrocellulose product. Any article or product either in the process of manufacture or fabrication or in the finished or completed state, which is composed wholly or in part of nitrocellulose, including positive or negative nitrocellulose motion picture film, nitrocellulose photographic film, nitrocellulose X-ray films, or pens, pencils, toilet articles, novelties or other articles of products composed either wholly or partly of nitrocellulose, excepting flammable liquids otherwise classified.

Nitrocellulose products building. A building, or part of a building, designed, intended or used for no purpose other than the manufacture, fabrication, assembly, completion, receiving, shipping, distributing or storing of either finished or unfinished nitrocellulose products or parts of such products.

Weight (nitrocellulose and nitrocellulose products). The weight of the nitrocellulose only, not including the weight of any article or material to which the nitrocellulose is attached or fastened nor the weight of any wrapping or packing material, carton or other shipping container.

Paint mixing or spraying room. A room designed, intended or used for the purpose of mixing or spraying more than ten gallons of paint, varnish, lacquer, enamel or other such volatile or flammable liquid or liquid containing any volatile flammable substance in solution or suspension, during any twenty-four hour period.

Smoke house. A building, or part of a building, designed, intended or used for no purpose other than that of smoking meats or fish.

Smoke room. An inclosure designed, intended or used for the smoking of meats or fish, located within any building other than a smoke house.

Standard drying room. A room designed, intended or used for the purpose of drying clothing, textiles, starch, candy, plaster work, or other articles or materials which do not give off explosive or flammable vapors during the drying process.

60-3. The following types of occupancy shall be included as hazardous use units as defined in section 48-10:

- Asphalt, tar, pitch and resin heating rooms.
- Corrosion acid storage buildings.
- Dry cleaning buildings.
- Fume or explosion hazard buildings and rooms.
- Grain bleachers.
- Grain elevators.
- Grinding and dust producing rooms.
- Hazardous chemical rooms and storage buildings.
- Highly flammable material storage buildings and rooms.
- Japanning and enameling rooms.
- Lumber dry kilns.
- Malt houses and similar buildings.
- Magazines.
- Motion picture trial exhibition rooms.

Motion picture studios.
Nitrocellulose buildings.
Nitrocellulose products buildings and rooms including certain rooms in motion picture film exchanges.
Paint mixing or spraying rooms.
Picker or shredder rooms.
Rooms for storage or baling of waste paper.
Smoke houses and smoke rooms.
Standard drying rooms.
Industrial properties with occupancies such as:
 Artificial flowers.
 Artificial and imitation leather.
 Carpet linings.
 Cereal, food, flour, grist and starch mills.
 Cotton batting.
 Cotton clothing.
 Cotton rag sorting.
 Cotton waste.
 Explosives.
 Feather renovating.
 Fireworks.
 Flammable liquids.
 Shoddy mills.
 Straw goods.
 Sugar grinding.
 Varnish.
 Woodworking.

60-4. Hazardous use units shall, for the purposes of this chapter, be further classified and subdivided as hazardous use general units, hazardous use storage units and hazardous use industrial units.

Hazardous use general units. A hazardous use general unit shall include any hazardous use unit other than a hazardous use storage unit and other than a hazardous use industrial unit.

Hazardous use storage units. A hazardous use storage unit shall include any hazardous use unit designed, intended or used for the storage of high hazard materials, high hazard products and all other high hazard storage uses not otherwise classified under this chapter. Hazardous use storage units shall include among others:

Corrosive acid storage buildings.
Fume or explosion hazard buildings and rooms for no other purpose than storage.
Grain elevators.
Hazardous chemical storage buildings.
Malt houses and similar buildings.
Highly flammable material storage buildings and rooms.
Magazines.
Nitrocellulose buildings.
Nitrocellulose products buildings and rooms for no purpose other than storage.
Rooms for the storage of waste paper.

Hazardous use industrial units. A hazardous use industrial unit shall include any hazardous use unit designed, intended or used for industrial purposes, including any operation or process incident to the producing, fabricating, assembling developing, moulding, pressing, preparing or adapting for use, repairing or refinishing of any high hazard material, high hazard product, article or substance or high hazard parts or appliances of any product or article not otherwise classified under this chapter. Hazardous use industrial units shall include, among others:

Fume or explosion hazard buildings or rooms in which any manufacturing is done.
Grain bleachers.

Grinding and dust producing rooms.

Japanning and enameling rooms.

Lumber dry kilns.

Nitrocellulose buildings.

Nitrocellulose products buildings and rooms in which any nitrocellulose manufacturing is done.

Paint mixing or spraying rooms.

Picker or shredder rooms.

Smoke houses and smoke rooms.

Standard drying rooms and other drying rooms for the drying of articles or materials which will give off explosive or flammable vapors during the drying process and industrial properties with occupancies such as those named under section 60-33.

60-5. No corrosive acid storage building, hazardous chemical storage building, dry cleaning building, grain bleacher, grain elevator, malt house or similar building, nitrocellulose building or nitrocellulose products building shall be located nearer than one hundred feet to any building in which there is an institutional, assembly or open air assembly unit, except as otherwise provided by sections 60-8 to 60-18.

60-6. The location of any hazardous use unit shall conform to such regulations and limitations of other provisions of this code applicable thereto and more restrictive than the building provisions of this code. Frontage consents shall be required for certain occupancies as provided by chapter 40 of this code.

60-7. Every court which is necessary in order to obtain windows or other openings for required natural lighting and natural ventilation shall be made to conform with the provisions of this code for such a court in an industrial or storage unit, except as otherwise provided in this chapter.

Safety Clearance

60-8. Whenever in the following sections the words "safety clearance" are used, said words shall be construed to require a space open its entire area to the sky, and which shall be continuous on all sides of the building or structure; between such building and any other building, or property dividing lot line, or the opposite side of every adjoining and adjacent public way or public park, or any main line of a steam, electric, elevated railway or any other railway right of way.

60-9. At least one side of every dry cleaning building in which a flammable solvent having a flash point below one hundred forty degrees Fahrenheit (closed cup tester) is used shall have a safety clearance of not less than fifteen feet, and every side, which is nearer than fifteen feet to another building or structure, or to a lot line, shall be a solid wall without any opening.

60-10. The minimum required safety clearance for flammable liquid storage tanks above ground, in reference to any building or lot line, shall be regulated according to capacity as follows:

Combined capacity of tanks (gallons)	Minimum distance to line of adjoining property which may be built upon (feet)
1 to 15,000	10
15,001 to 30,000	20
30,001 to 60,000	30

Each three thousand gallons additional, one foot additional, with a maximum requirement of two hundred fifty feet, provided however, that for tanks containing liquids having a flash point above 175 degrees Fahrenheit the maximum requirement shall be one hundred fifty feet. The safety clearance between tanks shall be regulated according to capacity as follows:

Capacity of the larger of the two tanks (gallons)	Minimum clearance between tanks (feet)
300 or less	3
500	3
1,000	3
8,000	3
12,000	3
18,000	3
24,000	3
30,000	5
48,000	10
75,000	10
100,000	13
150,000	15
200,000	Distance equal to the diameter of the greatest horizontal dimen- sion of the larger tank.
500,000	

A tolerance of ten per cent in capacity shall be allowed in all tanks. The minimum required safety clearance for flammable liquid storage tanks above ground, required by this section may be reduced to the minimum safety clearance between tanks, as provided above, whenever such tank is individually diked and protected by fire walls of four hour fire-resistive construction, extending not less than three feet above and beyond each tank, and provided with a fender or return wall for each such fire wall of the same height and thickness at each end and extending not less than three feet on each side of such fire wall.

Nothing in this section shall be interpreted or construed to apply to any group of oil-storage tanks, every part of which group has an open space of not less than 1,000 feet, continuous on all sides of the group of tanks or between such group of tanks and any building or property dividing line, or the opposite side of each adjoining and adjacent public way or public park or any main line of a steam, electric, elevated railway or any other railway right-of-way, provided that the provisions of this paragraph shall apply only to oil storage tanks storing liquids above the ground, and which liquids have a flash point above 150 degrees F. This paragraph shall not apply to any liquids stored under the ground.

[Amend. Coun. J. 3-16-59, p. 9916; 4-21-59, p. 42.]

60-11. All distilling and condensing plants, except as provided in section 60-103 shall have a clearance of not less than three hundred feet in reference to any building or lot line.

60-12. Any building, or group of buildings, used exclusively for the purpose of handling, distributing or storage of flammable liquids shall be exempt from the safety clearance requirements of this chapter with respect to any other building or structure, or storage tank within the same group and used for similar purposes, except as provided by section 60-10 for clearance between tanks.

60-13. Every building hereafter designed, erected, altered or converted for the purpose of manufacturing or storing for resale, any fume or explosion hazard gas in a quantity exceeding twenty-five hundred cubic feet during any twenty-four hour period shall be free standing and isolated by a safety clearance of not less than two hundred fifty feet. Every building hereafter designed, erected, altered or converted for the purpose of manufacturing, compressing or storing acetylene gas at a pressure of more than fifteen pounds per square inch, shall be free standing and isolated by a safety clearance of not less than two hundred fifty feet.

Any building or group of buildings used for the purpose of the production, distribution or storage of any fume or explosion hazard gas, shall be exempt from the provisions of the preceding paragraph with respect to any other building or structure within the same group and used for similar purposes. Any public utility engaged in the production, distribution or storage of illuminating

gas shall also be exempt from the provisions of the preceding paragraph, except as prohibited or otherwise regulated in other provisions of this code. Nothing in this section shall be construed as prohibiting the storage for use on the premises of acetylene gas in cylinders in a quantity of twenty-five hundred cubic feet or less or the generation of any such gas for use on the premises, in a quantity of twenty-five hundred cubic feet or less at a pressure of fifteen pounds or less per square inch, or the use of any number of cylinders of any such gas while in actual use or attached ready for use in any industrial process. Any mechanical refrigerating system built in accordance with chapter 85 shall be exempt from the provisions of this section.

60-14. Every grain bleacher shall be separated by a distance of not less than six feet from any other building; provided, however, that no grain bleacher shall be nearer than twenty-five feet to any window, or doorway of any other building unless such window is a fire window, or unless such doorway is provided with Class D fire floor.

60-15. Every grain elevator, malt house and similar building shall be so situated that it will not be so hazardous as to constitute a nuisance or be a menace to the safety of the public or to the adjacent property.

60-16. Every building hereafter designed, erected, altered or converted for the purpose of storing more of any hazardous chemical than the limited quantity provided for such chemical in section 129-71 shall be isolated by a safety clearance of not less than one hundred feet except as otherwise provided by this section.

Class IA, IB or IC Construction. Every such hazardous chemical building of Type IA, IB or IC construction shall be isolated from any other building on the same premises by a safety clearance of not less than ten feet; provided, however, that such safety clearance shall not be required for any such building having no openings within ten feet of any openings in any other wall or building on the same premises, or for any such building which is separated from any adjoining buildings by a fire wall without openings therein; and provided further that calcium carbide in excess of six hundred pounds may be stored in any building containing an acetylene generator when such building is built as required by sections 60-13 and 60-26 for fume or explosion hazard buildings.

Types II, IIIA, IIIB or IIIC Construction. Every such hazardous chemical building of Type II, IIIA, IIIB or IIIC construction shall be isolated from any other building on the same premises by a safety clearance of not less than twenty feet; provided, however, that such safety clearance will not be required for any such building having no openings within ten feet of any openings in any other wall or building on the same premises or for any such building which is separated from any adjoining building by a fire wall without openings therein; and provided further that calcium carbide in excess of six hundred pounds may be stored in any building containing an acetylene generator when such building is built as required by sections 60-13 and 60-26 for fume or explosion hazard buildings.

60-17. Without Barricades. Every magazine for explosives shall be isolated by a safety clearance according to capacity as follows:

<i>Capacity of Magazine (Pounds)</i>	<i>At Surface of Ground (Feet)</i>
100 or less	100
101 to 500, inclusive	400
501 to 1000, inclusive	600
1001 to 1750, inclusive	800
1751 to 2500, inclusive	1000

Such capacity shall be confined to the cubic contents allowable for such quantity of the particular type of commercial explosives for which a permit or license has been issued, in accordance with the provisions of this code regulating such use. Every magazine for fireworks shall be isolated by a safety clearance of not less than one-half the safety clearance required by this paragraph for explosives, for any like given quantity in pounds.

With Barricades. Whenever a magazine for explosives is screened by natural features of the ground, or by an artificial mound of solid earth of such height that any straight line drawn from the top of any side wall of such magazine to any point twenty-five feet above the nearest lot lines, or to the highest point of any building within the radius to be protected, will pass through such intervening earth barrier, then such minimum required horizontal safety clearances required by the first paragraph of this section may be reduced fifty per cent; provided, however, that for every one foot such magazine is depressed below the street grade at a quarry or other pit, such minimum required horizontal safety clearance may be reduced ten feet; provided further, that such lateral safety clearance shall be not less than twenty-five feet in any case.

60-18. Every nitrocellulose building shall be free standing and isolated by a safety clearance computed at the rate of five feet per one thousand pounds or fraction thereof of nitrocellulose manufactured or reclaimed; provided, however, that such safety clearance shall in no case be less than fifty feet; and provided further, that the requirements of this paragraph shall not apply to any buildings in which twenty-five pounds or less of nitrocellulose are manufactured or reclaimed during any twenty-four hour period.

Construction

60-19. Every interior doorway from any room or part of a hazardous use unit, which is required to have an enclosure of one hour fire-resistive or more fire-resistive construction, shall have a fire door as provided by chapter 65 for such an enclosure, except as otherwise required by this chapter.

60-20. The maximum capacity of a standard fireproof cabinet shall be two hundred pounds of nitrocellulose material or nitrocellulose product, or other high hazard material for which such vault is intended. All standard fireproof cabinets shall be constructed of metal. The bottom, top and sides shall be made of sheet metal not less than No. 18 U. S. standard gauge in thickness, and such cabinet shall be double walled with not less than one and one-half inches air space between the double walls. All joints in the sheet metal shall be riveted or welded. All doors shall be of construction equal to the cabinet, and shall have a three point lock and self-closing device. Any standard fireproof cabinet having more than one compartment shall have a separate partition constructed of not less than No. 18 U. S. standard gauge sheet metal, double walled, with an air space not less than one and one-half inches between the surface thereof.

60-21. General. The walls, floor and ceilings of a standard fireproof vault, whenever such a room is required by this code, shall be built of reinforced concrete or masonry of not less than three hours fire-resistive construction. The distance from the floor to the ceiling of a standard fireproof vault shall not exceed eleven feet. Where a standard fireproof vault is located within any building the cubical contents of such standard fireproof vault shall not exceed seven hundred fifty cubic feet. Where a standard fireproof vault is located outside of a building so that a safety clearance of not less than five feet is provided on not less than three sides of such fireproof vault, the cubical contents of such vault shall not exceed fifteen hundred cubic feet. Nothing in this chapter shall be construed as prohibiting more than one standard fireproof vault in any building or structure or on any lot or plot of ground. All openings in the floors, walls or ceilings of standard fireproof vault, except required vent flue openings and window openings for ventilation, shall be equipped and protected with a Class A fire door of the automatic type and shall have as its actuating mechanism to close such door, a thermostatic releasing device. No wood floor, wood racks, wood shelves, or any other combustible material other than the substance for which any standard fireproof vault is intended shall be allowed or permitted in such vault. Shelves or racks used to support the material stored in vault shall be of metal and of open construction, so arranged as to permit water from the sprinkler heads to pass between container or packages.

Flammable Liquids and Acids. Wherever a standard fireproof vault is used for the storage of flammable liquids or corrosive acids there shall be a sill at every doorway thereto, constructed of non-combustible materials and of suffi-

cient height to provide a liquid tight basin capable of retaining one and one-half times the total quantity of liquid kept or stored in such vault. All floor drains in a vault used for storing or keeping flammable liquids or corrosive acids shall have no connections with the drainage system of the building, but shall be arranged to drain to a location outside of the building remote from all connections or drains to the sewer system. [Amend. Coun. J. 1-20-50, p. 5758.]

60-22. Every room hereafter designed, erected, altered or converted for the purposes of heating asphalt, tar, pitch or resin by means of direct heat shall have an enclosure of not less than two hour fire-resistive construction. Every doorway in any such room shall have a sill of sufficient height and the floor and walls of the room shall be so constructed as to form a basin which will confine within the room, one and one-half times the maximum amount of asphalt, tar, pitch or resin in liquid form, for which accommodations are provided in the room. Every inside doorway connecting any such room with another such room shall be provided with a Class C fire door.

60-23. Every building, or part of a building, designed, erected, altered or converted for the purposes of a cereal mill, feed mill, flour mill, grist mill, or starch mill and in which more than five hundred pounds of any cereal, feed, flour, grist or starch is produced during any twenty-four hour period shall be of Type I-A, I-B or I-C construction.

60-24. Every corrosive acid storage building shall be of Type I-A, I-B or I-C construction and shall be without any basement, except a basement provided and used for purposes other than that of the storage of corrosive acid.

60-25. Every dry cleaning building in which a flammable solvent having a flash point below one hundred forty degrees Fahrenheit (closed cup tester) is used shall be of Type I-A, I-B or I-C construction, with all walls, both exterior and interior, of construction the same as required for a fire wall. There shall be no basement or mezzanine in any such building. The surface of the first floor shall be higher than any walk, pavement or ground adjoining the building, and the first floor construction shall be such that there will be no air space or void in or beneath it. There shall be no doorway, window or other opening between any two dry cleaning rooms. Every doorway of any such building shall be provided with a non-combustible door and every window thereof shall be a fire window.

Dry cleaning systems utilizing a solvent having a flash point of one hundred forty degrees Fahrenheit and above (closed cup tester) may be employed in any business, mercantile, storage or industrial unit: Provided, that the equipment installed therein shall conform to the Regulations of the National Board of Fire Underwriters for Safeguarding Dry Cleaning and Dry Dyeing Plants, published in its pamphlet No. 32 dated February, 1944, for the class designated therein as Class II; provided further, that in buildings of mixed occupancy such dry cleaning systems shall be separated from other occupancies by construction of two hour fire-resistive value; provided further, that doorways communicating with other occupancies or with a public corridor are provided with Class C fire-resistive doors; provided further, that rooms in which such systems are employed shall have windows in area equal to not less than ten per cent of the floor area; provided further, that such windows shall be hung off-center and made to operate by rate-of-rise device so that the sash will drop outward in the event of fire or explosion; provided further, that such windows shall open to a street, alley, court or other space open to the sky; and provided further, that no such dry cleaning system shall be located in any part of a building used as a retail store in which more than two salespersons are employed.

Dry cleaning systems in which solvents of the chlorinated hydrocarbon type are used may be employed in any business, mercantile, industrial or storage unit: Provided, that such system is so constructed as to prevent the escape of any vapors into the atmosphere of the room, or shall be enclosed within air tight partitions, immediately surrounding the system, so as to prevent the escape of such vapors beyond the enclosed space; provided further, that in any case where such systems are used, adequate ventilation capable of changing the air in the room every three minutes shall be supplied; provided that such

systems shall exhaust to the outside atmosphere, and the exhaust outlet shall not be closer than twenty feet to the opening of any building; and provided further, that no such dry cleaning system shall be located in any dwelling or place of public assembly.

60-26. General. Every fume or explosion hazard building shall be without any basement, except such a basement as is permitted under section 60-33 for a hazardous chemical storage building.

Fume Hazard Gases. Type I-A, I-B, I-C, II, III-A, III-B or III-C construction shall be used for any building in which any fume hazard gas is manufactured, compressed air stored; provided, however, that a building may be of any type of construction permissible respectively for an Industrial Unit or a Storage Unit under the provisions of this code, where any gas is permitted to be stored or used on the premises. Every such building of Type III-A, III-B or III-C construction should be not more than one-story above grade in height and shall have no mezzanine unless such building is equipped throughout with a standard system of automatic sprinklers.

Explosion hazard gases. Type I-A, I-B or I-C construction shall be used for any building in which any explosion hazard gas is manufactured, compressed or stored; provided, however, that a building may be of any type of construction permissible respectively for an industrial unit or a storage unit under chapter 51, where any such gas is permitted to be stored or used on the premises.

Refrigerating systems. Any mechanical refrigerating system built in accordance with the provisions of chapter 85 shall be exempt from the provisions of this section.

Gas holders. It shall be unlawful to take out of service any gas holders containing explosion hazard gases, or to make any connections thereto within the city without first notifying the commissioner of buildings twenty-four hours in advance, and without first emptying and purging such gas holders of all explosive gases, and without first making a physical disconnection of all connecting piping, taking out sections thereof to make such disconnections. Before making such repairs, the contents of the gas holders shall be tested and the analysis of the mixture of air or inert gases therein shall be recorded and reported to the commissioner of buildings. Every such gas holder or tank, containing more than twenty-five hundred cubic feet of gas, shall be inspected at least once every five years by a recognized authority, employed by the owner and approved by the commissioner of buildings, and a report of all such inspections showing the condition of said gas holder or tank, together with a statement of necessary repairs and the further statement that such repairs have been made and that said gas holder or tank is in a good and safe condition with an expectancy that this condition will endure for the succeeding term of five years, shall be submitted to the commissioner of buildings. A non-corrosive metal tag containing the date of every such inspection and approval shall be attached to each such gas holder following every such inspection. The provisions of this paragraph shall not apply to cylinder or containers meeting the requirements of the interstate commerce commission regulations for interstate shipments.

60-27. (a) General. Every fume or explosion hazard room in a building of Type I-A, I-B or I-C construction shall have an enclosure of two hour fire-resistive construction, except as otherwise provided under this section. Every such room in a building of other than Type I-A, I-B or I-C construction shall be enclosed by not less than one hour fire-resistive construction; provided, however, that the requirements of paragraphs (b) and (c) of this section shall prevail where inconsistent with this paragraph.

(b) Water Purifying Equipment. No corrosive, explosive, flammable, irritant, poisonous, toxic or other noxious gas in a quantity exceeding ten pounds, whether in a container, cylinder, piping or other water purifying equipment shall be permitted in any assembly unit. All containers, cylinders, piping or other equipment containing more than ten pounds of such gases named in this section in any other building, shall be located within a room or space having a four hour fire-resistive enclosure. Any such room shall have no opening except to an open court, private alley, public way, or other open space not less than one hundred square feet in area. Nothing in the provisions of this section shall

be construed as prohibiting the location of such equipment in the same room with a furnace, boiler, or other heat producing unit or incinerator, if such room is made to comply with the provisions of this section.

(c) *Cooling and refrigerating equipment.* Any room or space used for cooling or refrigerating equipment shall conform to the requirements of chapter 85 for refrigerating systems.

60-28. Every grain bleacher shall be of Type I-A construction. No combustible construction shall be used between a grain bleacher and any other building.

60-29. Every grain elevator, malt house and similar building shall be of Type I-A construction.

60-29.1. In any existing grain elevator, malt house or similar building, the exterior walls of the marine tower, which is defined as that part of the structure in which is located the machinery for conveying grain from boats to the conveying bridge and thence to the bins; and the exterior walls of cupolas and conveyor bridge, which is that part of the structure housing the conveying and elevating machinery above the fireproof bins, may, if the same require replacement, be replaced with galvanized corrugated steel, protected metal or asbestos corrugated material fastened to the steel structure by rust-proof bolts.

60-30. Every grinding or dust producing room, paint mixing or spraying room and every room containing a japanning or enameling dip tank, vat, or japanning oven located in any building other than a building of Type I-A, I-B, or I-C construction, which is also equipped throughout with a standard system of automatic sprinklers, shall be constructed in accordance with the requirements of this section. Any such room, with a floor area of not more than six hundred square feet, shall have a floor of any type of construction permitted for the building in which located and shall have both walls and ceiling of one hour fire-resistive construction. Any such room, with a floor area of more than six hundred square feet and not more than twelve hundred square feet, may have a floor of any type of construction permitted for the building in which located, and shall have both walls and ceiling of two hour fire-resistive construction. Any such room with a floor area of more than twelve hundred square feet, shall be separated from every other part of the building by not less than four hour fire-resistive construction. No such rooms shall have any opening except a doorway or doorways between such room and any other part of the building. Every doorway through any such wall or separation shall be provided with a door of the character required by chapter 65 for fire doors. Nothing in this section shall be construed as prohibiting or preventing the installation of non-combustible piping or conveyors or similar dust-tight enclosed mechanical devices between floors or stories in such rooms or buildings.

60-31. Every hazardous chemical room, other than a vault for the storage of a hazardous chemical, shall be separated from all other parts of the building by a four hour fire separation, with no window or other opening, except a doorway or doorways between such vault and any other part of a building.

60-32. Every vault for the storage of hazardous chemicals shall be a dry, waterproof, standard fireproof vault and not more than four vaults for such purpose shall be permitted in any building. No such vault shall be located in any floor or building in which prohibited under section 60-66.

60-33. Type I-A, I-B, I-C, II, III-A, III-B or III-C construction shall be used for any hazardous chemical storage building. Every such building of Type III-A construction shall be not more than two stories in height. Every such building of Type III-B or III-C construction shall not be more than one story in height and shall have no mezzanine. Every such building of any type of construction shall be without any basement except a basement provided and used solely for the purpose of a heating plant for the building which shall be separated from every other part of the building by a fire wall and shall have no doorway, window or other opening between such space and any other part of the building. Every such building shall be so constructed as to be dry.

60-34. A highly flammable material storage building may be of any type of construction permitted under the provisions of this code for a storage unit.

60-35. Every room in which provisions are made for the storage of any highly flammable materials shall be separated from every other part of the building by separations of the following fire-resistive ratings:

<i>Capacity of Room.</i>	<i>Fire-Resistive Rating.</i>
More than 5,000 cubic feet	4 hours
2,500 cubic feet to 5,000 cubic feet	2 hours
Less than 2,500 cubic feet	1 hour

Openings through four-hour separations shall be protected with Class A fire doors. Openings through two-hour separations shall be protected with Class C fire doors.

60-36. A kiln or room designed, erected, altered or converted for the purposes of drying lumber, wood products or wooden articles by artificial heat shall have an enclosure of two hour fire-resistive construction, if it has a floor area of five hundred square feet or less, and of three hour fire-resistive construction if it has a floor area of more than five hundred square feet. No such kiln or room shall have any opening except a doorway or doorways between such room and any other part of the building. Every doorway into any such room shall be provided with a door of the character as required by chapter 65 of this code.

60-37. First-Class Magazines. Any first-class magazine for the storage of explosives shall not exceed one story, or fifteen feet in height, and such magazine shall not have any basement or any mezzanine. Every first-class magazine shall be constructed of non-combustible materials and shall have exterior walls of solid-brick masonry; provided, however, that walls may be constructed of wood sheathing and wood studs with all space between the studs filled with dry sand for a thickness of not less than five and one-half inches and covered on the outside surface with non-combustible materials. There shall be no openings in any walls except a doorway, which shall be provided with a non-combustible or metal-clad door.

Second-Class Magazine. Any second-class magazine shall be constructed of non-combustible materials; provided, however, that the walls and roof may be of wood, metal-clad on the outside surface or covered with fire-retarding roof coverings.

60-38. General Requirements. Any person lawfully engaged in the business of manufacturing, dealing in, selling, leasing, renting or exchanging motion picture films shall have the right to project pictures from nitrocellulose films by means of motion picture machines for exhibition to prospective purchasers, renters or lessees of films, in a room meeting the requirements of this chapter in respect thereto, which room shall not be required to conform to the special provisions in the building provisions of this code, governing theaters, public assembly units or other places where motion pictures are permitted to be shown.

Exhibition Room. Any motion picture trial exhibition room shall have a floor of the same type of construction as required for the building in which located and shall have both walls and ceiling of one hour fire-resistive construction.

Projection Room. Every motion picture trial exhibition room shall have a projection room, which shall have an enclosure of the same character as required by section 54-6.6 for a projection block in a theater. If the floor of the projection room is above the level of the floor of the exhibition room, the projection room shall be supported on structural members of non-combustible materials. Every opening in such room for the purposes of picture screen observation or operation of a projector shall be equipped with a closure such as required by section 54-6.6 for a projection room in a theater.

60-39. Every nitrocellulose building shall be of Type I-A, I-B or I-C construction.

60-40. Every nitrocellulose room shall have a separation between it and any other room permitted in the same building of not less than two hour fire-resistive construction.

60-41. A nitrocellulose products building not more than one story above grade in height may be of any type of construction permissible for industrial or storage units under the provisions of this code, except Type IV-A or IV-B construction. Types III-B and III-C construction shall not be used for any nitrocellulose products building exceeding two stories above grade in height. Type III-A construction shall not be used for any nitrocellulose products building exceeding three stories above grade in height. A basement shall be permitted in any nitrocellulose products building; provided, however, that no basement in such building shall be designed, constructed, altered or converted for the purposes of manufacturing, fabricating, assembling, adapting, completing or storing any nitrocellulose product.

60-42. Every nitrocellulose products room shall have an enclosure of two hour fire-resistive construction, if it has a floor area of one thousand square feet or less and of three hour fire-resistive construction of solid masonry or concrete if it has a floor area exceeding one thousand square feet but not more than two thousand square feet; and of four hour fire-resistive construction if it has a floor area exceeding two thousand square feet; provided, however, that these requirements shall not apply to a standard fireproof vault intended for any of the purposes of such a room.

60-43. Every room used for the picking or shredding of any highly flammable material named under section 60-2 shall meet the requirements of section 60-54 for the construction of a special drying room. Any opening for a stock spout through the enclosure for any such room shall be provided with a fire door as required by chapter 65 of this code for a doorway through a separation of equal fire-resistive value.

60-44. Any building used exclusively for the production, distribution or storage of manufactured gas as a public utility shall be exempt from the requirements of this part of this chapter dealing with construction except the provisions of section 60-52 for tanks for flammable liquids; provided, however, that such buildings shall be constructed as provided in section 58-2 entirely of non-combustible materials, with interior framing members either with or without fireproof covering.

60-45. Every room for the drying of articles or materials, which will give off explosive or flammable vapors during the drying process, shall have an enclosure of the same character as required by section 60-42 for a nitrocellulose products room of the same area; provided, however, than an opening, or openings from any adjoining room for a conveyor may be provided in an enclosure for any such drying room if each such adjoining room is made to conform with the requirements of this section for such a drying room; and provided further, that if a system of collecting and disposing of the vapors produced in the drying room is provided, then the enclosure for the drying room shall be not less than one hour fire-resistive construction in any case, and the provisions of this section for an adjoining room in which there is a conveyor extending into the drying room shall not apply.

60-46. Every room designed, intended or used for the storage or baling of waste paper in a building of Type I-A, I-B, I-C, II or III-A construction shall have an enclosure of not less than two hour fire-resistive construction with every doorway in such an enclosure having a Class C fire door and every window therein a fire window. Every such room in a building of Type III-B or III-C construction shall have walls and ceiling of not less than one-hour fire-resistive construction.

60-47. Provisions shall be made in service or filling stations by grading driveways, or raising door sills or other means, to prevent gasoline spills or overflows from flowing into or under buildings.

60-48. (a) *Smoke Houses.* Every smoke house shall be of Type I-A, I-B or I-C construction, and no combustible material shall be used in the construction thereof.

(b) *Smoke Rooms.* (1) General. Every smoke room thirty square feet or less in floor area, or having a volume of two hundred ten cubic feet or less, shall be enclosed with not less than three hour fire-resistive construction, and every smoke room of greater floor area or of greater volume shall be enclosed by a four hour fire separation. No combustible material shall be used in the construction of any smoke room.

(2) Floor construction. Every smoke room thirty square feet or less in area, which is supported by the floor construction of the building in which located, shall be built upon a standard furnace foundation, meeting the requirements of section 80-8, installed on top of the building floor.

(3) Superimposed smoke rooms. For smoke rooms superimposed one above another, in a building of other than Type I-A, I-B or I-C construction, the enclosing walls shall be supported by independent foundations and shall carry no floor or roof load other than a smoke room floor or roof load. Any floor separation between such rooms in a building of any type of construction may be an open grill work of metal designed for a uniformly distributed live load of seventy-five pounds per square foot. The ceiling or roof of the uppermost room shall be of Type I-A regardless of the type of construction of the building in which located.

(c) *Fire Pits.* Every fire pit for a smoke house or smoke room shall have a floor and walls of not less than four hour fire-resistive construction, except as otherwise provided for a fire pit in a portable smoke room under section 60-49.

(d) *Doors and Frames.* Every doorway to a smoke house or smoke room shall be provided with a door formed of iron or steel not less than one hundred and nine thousandths inch thick, stiffened around all edges and crosswise at intervals of three feet or less in height with angles, tees or other iron or steel shapes. Every such door shall be hung in an iron or steel frame, not less in thickness at any point than three-sixteenths inch anchored to the wall construction.

(e) *Openings for Trolleys.* It shall be permissible to provide an opening for a trolley in or above any door to a smoke house or smoke room; provided, however, that every such opening shall have an iron or steel cover of the same thickness as required for the door, and so equipped that in case of fire, it shall close automatically by the release of a fusible link or the actuation of a thermostatic device.

(f) *Smoke Flues.* Every smoke flue for a smoke house or smoke room shall meet the requirements of chapter 63 of this code where applicable to the character of flue used, except as otherwise provided for a smoke flue for a portable smoke room under section 60-49.

(g) *Windows.* Any window provided in a smoke house or smoke room shall be a fire window.

60-49. It shall be permissible to install and use a smoke room having an enclosure of metal construction in lieu of the construction required under section 60-48.

Foundations. Every portable smoke room shall be built upon a standard furnace foundation as described in section 80-8; provided however, that such a foundation shall not be required for a portable smoke room in a building of Type I-A, I-B or I-C construction, unless there is a combustible finish on such floor.

Walls and Ceilings. The walls and ceiling of every portable smoke room shall consist of an inner and outer shell of sheet metal, not less than three-eightieths inch thick, with riveted or welded seams and joints, secured to a rigid framework of suitable iron or steel shapes. The inner and outer metal shells shall be separated not less than one and one-half inches, the space between being filled solid with fused non-combustible insulating material not less than one and one-fourth inches thick.

Fire Pits. The fire pit in every portable smoke room shall be entirely of metal and set upon legs with the bottom of the pit not less than two inches above the floor surface.

Smoke Flues. Every smoke flue for a portable smoke room shall be a metal flue connected with a masonry chimney, or a metal flue extended through the roof of the building. Every metal smoke flue shall be formed of sheet metal not less than one-sixteenth inch thick with riveted or welded seams and joints. Where a metal smoke flue is extended through combustible construction, the flue shall be passed through a double walled, ventilated metal sleeve as required by chapter 63 of this code.

Doors. Every doorway to any portable smoke room shall be provided with a door formed of sheet metal as required by section 60-48 for smoke rooms.

Clearances. No part of a wall or ceiling of any portable smoke room shall be located nearer to any combustible construction than is permitted under chapter 80 of this code for low pressure boiler breechings.

60-50. Every standard drying room for the drying of articles or materials which do not give off explosive or flammable vapors during the drying process shall have an enclosure of not less than one hour fire-resistive value.

60-51. In any special room for flammable liquids, the door openings to other rooms or buildings shall be provided with non-combustible sills, raised not less than six inches above the floor of such special room. Where the total quantity of class I and class II liquids stored or handled in any room, does not exceed two hundred gallons, such room shall have floors, walls and ceilings of not less than one-hour fire-resistive construction. Floors shall be arranged to drain toward the outside of the building. Where the total quantity of class I or class II flammable liquids stored or handled in any room exceeds two hundred gallons, but does not exceed four hundred gallons, all floors, walls and ceilings of such room shall be of not less than two hour fire-resistive construction. Where the total quantity of class I or class II flammable liquids stored or used exceeds four hundred gallons, but does not exceed six hundred gallons, the floors, walls and ceilings of such room shall be of not less than three hour fire-resistive construction. Where the total quantity of class I or class II flammable liquids stored or used exceeds six hundred gallons, the floors, walls and ceilings of such room shall be of not less than four hour fire-resistive construction. Outside storage houses for the storage and handling of flammable liquids shall be constructed in accordance with this section. All door openings through the inclosures of such rooms into other rooms or buildings, shall have fire doors as required by chapter 65 of this code for such fire resistive walls. The provisions of this paragraph do not apply to fuel oil storage tanks otherwise permitted by section 60-52.

60-52. Above ground tanks for flammable liquids shall be constructed throughout of open hearth steel or of wrought iron of a thickness in accordance with the following requirements:

Less than 1100 gallons capacity.

Capacity (gallons)	Minimum thickness of material (U. S. standard gauge)
1 to 60, inclusive	18
61 to 350, inclusive	16
351 to 560, inclusive	14
561 to 1100, inclusive	12

No open tank shall be used. Nothing in this chapter shall be construed as prohibiting the use of concrete tanks for the storage of liquids heavier than thirty-five degrees Baume gauge. All concrete tanks shall be constructed in accordance with the requirements of chapter 73 of this code.

Horizontal tanks containing over 1,100 gallons. Tanks having a diameter of six feet or less shall be made of not less than three-sixteenths inch steel. Tanks having a diameter of more than six feet and not exceeding eleven feet, six inches shall be made of not less than one-fourth inch steel.

Vertical tanks containing over 1,100 gallons. Vertical tanks having more than eleven hundred gallons capacity shall be so constructed of such material and so arranged as to have a factor of safety of not less than two and five-

tenths. The minimum thickness of the shell or bottom shall be not less than three-sixteenths inch. The minimum thickness of roofs shall be not less than one-eighth inch. The tensile strength of the steel plate and the shearing strength of rivets shall be in accordance with the requirements of chapter 74 of this code. Tanks shall be riveted, welded or brazed and shall be caulked and made tight in a workmanlike manner. The top of tanks shall be securely fastened to top ring with joints having the same tightness as the joints between the rings. All iron or steel tanks shall be thoroughly coated on the outside with a heavy protective paint. Roofs or tops of tanks shall have no unprotected openings, and shall be firmly and permanently joined to the tank, and all joints shall be riveted and caulked, brazed or welded.

Pressure Tanks. Pressure tanks shall be riveted, welded or brazed and shall be fastened, caulked or otherwise made tight so as to sustain safely a hydrostatic test at a pressure not less than double the pressure at which the tank is to be used. The top of the tank shall be securely fastened to the top ring with joints of equal tightness to the bottom rings. Tanks shall be covered with heavy protective paint. All pipe connections shall be made through flanges or metal reinforcement securely riveted, welded or bolted to the tank and made thoroughly tight. Pressure tanks, including top, sides and bottom, shall be constructed entirely of metal. All openings in such tanks shall be gas tight except the breather vent which shall be screened as provided in sections 60-78 to 60-89.

Foundations and Grounding. All tanks shall be electrically grounded by resting directly upon moist earth or shall be electrically grounded to permanent moisture. No insulated connections shall be permitted. All steel work of reinforced concrete tanks shall be inter-connected and grounded as herein provided for tanks. Tanks more than one foot above the ground shall have foundations and supports of non-combustible material. No combustible material shall be permitted under or within ten feet of any above-ground storage tank; provided, however, that nothing in this chapter shall be construed as prohibiting wooden cushions under tanks. Unprotected steel is prohibited as a means of supporting tanks when such tanks are located fifty feet or less from loading or unloading points, buildings or storage of combustible substances or materials. Nothing in this paragraph referring to unprotected steel as a means of supporting tanks shall be interpreted or construed as applying to tanks used for storage of flammable liquids in Class I, II, III and IV.

Dikes. Each group of tanks shall be diked. Dikes shall be constructed of earth or masonry. Each dike shall have a capacity of not less than one and one-fourth times the combined capacity of the tanks which it surrounds. Earth dikes shall have a flat section at the top of the dike not less than three feet in width and earth banks shall have a slope of not less than one and one-half inches to the foot on both sides. Earth dikes shall be not less than four feet high on the inside and in no case higher than one-fourth the height of the tank when said tanks exceeds sixteen feet. Embankments or dikes shall be continuous with no openings for pipe or roadways. Piping shall be laid well below the foundation of embankments.

Capacity Limits. The capacity of any tank containing flammable liquids of Class I and Class II shall not exceed fifteen thousand gallons. The total capacity of tanks in any storage yard for the storage of Class I, II and III flammable liquids shall not exceed seven hundred fifty thousand gallons, and the capacity of any storage yard used exclusively for the storage of Class IV flammable liquids shall be unlimited, such storage yard including all space within the required dikes. Nothing herein shall be construed as prohibiting in wholesale distributing yards above ground gravity flow self-measuring filling tanks of a capacity not to exceed one thousand gallons; provided, however, that not more than three such measuring tanks shall be used in any such yard. The distance from said filling tanks to other tanks or buildings shall be in accordance with the tables of clearances in section 60-10.

[Amend. Coun. J. 3-16-59, p. 9916; 4-21-59, p. 42.]

60-53. Construction Materials. Underground and enclosed tanks for flammable liquids shall be constructed of galvanized steel, or open hearth steel, or

of wrought iron of thickness and weight not less than provided in the following table:

Capacity (gallons)	U. S. Standard Gauge	Minimum Thickness of Materials Pounds Per Square Foot
1 to 285, incl.	16	3.125
286 to 560, incl.	14	4.375
561 to 1,100, incl.	12	7.50
1,101 to 4,000, incl.	7	10.00
4,001 to 12,000, incl.	$\frac{1}{4}$ in.	12.50
12,001 to 20,000, incl.	$\frac{5}{16}$ in.	2.50

All material used in underground and enclosed storage tanks, for which material is lighter than No. 7 U.S. standard gauge shall be galvanized. If internal bracing is provided, tanks for the storing of Class III and IV liquids, having a capacity of from twelve thousand and one to thirty thousand gallons, shall be built of steel plate not less than one-fourth inch thick. All joints of tanks shall be riveted and caulked, brazed or welded. Tanks shall be tight and sufficiently strong to bear without injury the most severe strains to which such tanks are subjected. Shells of tanks shall be properly reinforced where connections are made. All connections shall be made through the top of the tanks above the liquid level. Tanks and systems under pressure shall be designed for four times the maximum working pressure and such tanks shall be tested at twice the maximum working pressure. All iron or steel tanks shall be coated on the outside with tar or asphaltum or heavy protective paint. All concrete tanks shall be constructed in accordance with the provisions of chapter 73 of this code.

Covering. All flammable liquid tanks buried underground shall have the top of the tank not less than two feet below the surface of the ground, except that in lieu of such covering, tanks may be buried under not less than twelve inches of earth, with a cover of reinforced concrete not less than six inches in thickness provided over such tanks, which shall extend not less than one foot horizontally beyond the projected limits of the tanks in all directions. All concrete work shall be in accordance with chapter 73 of this code. Where tanks are liable to be displaced because of moisture in the ground, all tanks shall be securely anchored or weighted. Where tanks are located under driveways, such tanks shall be not less than three feet below the top surface of the driveway; provided, however, that if such driveways are paved with concrete not less than six inches in thickness, the total coverage above the top of the tank shall be not less than two feet.

Capacity. The total capacity of underground tanks is limited in respect to the lowest floor, basement or part of any adjacent building as given in the following table:

Maximum Capacity of Tanks for Underground Storage.

If top of tank is above the lowest floor, basement or part of any building with a clearance of 10 feet or less.....	Class I, II, and III Under 100° F. Flash Point (Gallons)	Class III Above 100° F. Flash Point (Gallons)
More than 10 feet	550	50,000
More than 20 feet	2,000	75,000
More than 25 feet	5,000	100,000
More than 30 feet	15,000	150,000
More than 40 feet	20,000	200,000
More than 50 feet	50,000	500,000
More than 50 feet	Unlimited	Unlimited

60-54. Tanks for flammable liquids inside of buildings other than structures used exclusively for the purposes of hazardous use units for the handling and storage of flammable liquids, shall be constructed as follows:

120 Gallons or Less. Tanks for Class II and III liquids having a capacity of one hundred and twenty gallons or less shall be of steel or tin plate, soldered and tight. Material shall be of not less than No. 20 U. S. standard gauge; Provided,

however, that where tanks contain more than six gallons of liquid used in connection with and in the same room with oil burning equipment, the provisions of the third paragraph shall apply. Nothing in the building provisions of this code shall be construed as prohibiting the use of original barrels or drums as a source of supply, if such barrels or drums are substantially placed to prevent tipping or rolling. Pumps shall be inserted through a close fitting connection in the side or the head of the container.

Over 120 Gallons. Tanks for class II and III liquids having a capacity of more than one hundred twenty gallons shall be of the thickness required by the first paragraph of section 60-53 or shall be constructed of concrete.

Location and Foundation. Tanks shall be located below the level of any piping to which they are connected, or else shall be equipped with standard anti-siphoning devices, and shall be set on a substantial foundation. Tanks exceeding twenty-five hundred gallons capacity shall be supported independently of the floor construction.

Storage Tanks for Fuel Oil. Steel tanks containing more than two hundred eighty-five gallons and installed in connection with oil-burning equipment shall be constructed in accordance with the requirements of the first paragraph of section 60-53. Fuel oil tanks located inside of buildings shall be located in the basement or lowest story thereof, and shall not exceed five hundred fifty gallons individual or aggregate capacity if unenclosed. Fuel oil storage tanks having an aggregate capacity of more than five hundred fifty gallons shall be enclosed within walls of not less than four hour fire-resistive construction extending at least one foot above the highest level of the tanks. The ceiling or enclosure above such tanks shall be of not less than four hour fire-resistive construction, unless such tanks are surrounded with sand or earth within the enclosure and up to not less than one foot above the highest level of the tanks. In lieu of any such enclosure, the tanks may be imbedded solidly in reinforced concrete not less than six inches thick at any point. Concrete fuel oil tanks shall have an enclosure as required by this paragraph for steel tanks. Walls of concrete tanks shall be constructed independently of and not in contact with the building walls or inclosing walls. In buildings of Type III-A, III-B or III-C construction the gross capacity of fuel oil storage tanks shall not exceed five thousand gallons. In buildings of Type I-B, I-C or II construction the gross capacity of fuel oil storage tanks shall not exceed seventy-five hundred gallons. In buildings of Type I-A construction the gross capacity of fuel oil storage tanks shall not exceed ten thousand gallons, provided, however, that any room in a building of Type I-A construction, and having a separation of four hour fire-resistive construction from any other part of the building, may have a gross capacity of fifty thousand gallons, if such tanks are also surrounded with sand not less than twelve inches thick at the sides and one foot, six inches thick over the top.

Rooms and Floor Areas

60-55. The requirements of this code relating to size and location of rooms in an industrial or storage unit, shall apply to a hazardous use unit in accordance with the provisions of section 60-1, except as otherwise provided in this part of this chapter dealing with rooms and fire areas.

60-56. There shall be no limitation of floor areas in hazardous use units of Type I-A or Type I-B construction, except as required by this part of this chapter dealing with rooms and fire areas.

60-57. None of the following herein described hazardous use units:

Asphalt, tar, pitch, resin or praffin heating room.

Corrosive acid storage room.

Drying room for any article or material which will give off explosive or flammable vapors during the drying process.

Fume or explosion hazard.

Grinding or dust producing.

Hazardous chemical.

Highly flammable material storage.

Japanning or enameling room.

Nitrocellulose products room.

Paint spraying or mixing room.
Picker or shredder room.
Standard fireproof vault.
Sulphur storage room.

shall be located in any story below grade in any building hereafter designed, erected, altered or converted for any purpose; provided, however, that one or more rooms built as required by section 60-26 for no purpose other than that of the operation of water purification plants or a refrigerating unit may be located in any basement of any building.

60-58. No asphalt, tar, or resin heating rooms shall have a floor area greater than twelve hundred square feet.

60-59. No dry cleaning room in which a flammable solvent having a flash point below one hundred degrees Fahrenheit (closed cup tester) is used shall have a floor area greater than three hundred square feet.

60-60. *Fume or Explosion Hazard Buildings.* Every fume or explosion hazard building shall have a floor area limited by the provisions of chapter 51 for industrial units.

Fume or Explosion Hazard Rooms. No fume or explosion hazard room shall have a floor area of more than six hundred square feet; provided, however, that this requirement shall not apply to a room used for no purpose other than the operation of a water purification plant or refrigerating unit. Two sides, or two ends, or one side and one end of every fume or explosion hazard room shall be inclosed by an outside wall. Not more than two fume or explosion hazard rooms shall be permitted in any building; provided, however, that in a building equipped throughout with a standard system of automatic sprinklers not more than six such rooms shall be permitted.

Manufactured Gas Buildings. Any building used exclusively for the production, distribution or storage of manufactured gas as a public utility, shall be exempt from the provisions of this section.

60-61. No hazardous chemical room or storage building shall have a floor area of more than six hundred square feet.

60-62. The capacity of a motion picture exhibition room shall not exceed fifty persons, with an allowance of not less than ten square feet of floor area for each seat.

60-63. Any nitrocellulose products room other than a standard fireproof vault shall not exceed the limits of floor area required by section 60-41 for certain types of fire-resistive construction. Every room used for the examination or repair of motion picture films shall be occupied by not more than eight persons at one time, and the floor area shall not exceed four hundred square feet, inclusive of a space of not less than four feet, six inches which shall be allowed between tables for aisles leading to exits.

60-64. No picker or shredder rooms shall have a floor area of more than one thousand square feet.

Buildings of Mixed Occupancy

60-65. The requirements of this code for Business, Industrial or Storage Units shall apply to any Hazardous Use Unit for business, industrial or storage purposes except as otherwise provided in this part of this chapter dealing with buildings of mixed occupancy; and the most restrictive provisions in respect to buildings of mixed occupancy shall govern wherever other occupancy chapters are inconsistent with the requirements of this chapter.

60-66. *Auxiliary Business Use.* Every hazardous use unit required under sections 60-5 to 60-18, inclusive, to be isolated from every other building or structure shall be located in a building used for no purpose, other than that of the purposes of such a hazardous use unit; provided, however, that any such building may have an auxiliary office designed, intended and used for the regular occupancy of not more than three persons.

Adjoining Other Occupancies. The following hazardous use units shall be permitted to adjoin a building having the same occupancy, or a building having one or more other occupancies:

Corrosive acid storage buildings.

Cereal, feed, flour, grist and starch mills.

Dry cleaning building, subject to the provisions of section 60-9.

Fume or explosion hazard buildings, subject to the provisions of section

60-13.

Highly flammable material storage buildings.

Smoke houses.

Any such building except a dry cleaning building may have an auxiliary office, designed, intended or used for the regular occupancy of not more than six persons.

Hazardous Use Units Prohibited. A hazardous use unit shall not be permitted in any building used for any other occupancy, except as provided by section 48-12.5 of this code.

60-67. Every hazardous use unit shall be separated from every other hazardous use unit and from every other occupancy in the same building by construction of the character as required by sections 60-19 to 60-54, inclusive, and as provided by section 48-12.5 of this code.

60-68. There shall be no opening between a hazardous use unit and any adjoining or adjacent building except in the ground story or first story; provided, however, that adjoining and adjacent hazardous use units of the same class of occupancy which are used by the same person may have communication on any floor, subject to the applicable provisions of section 48-12.5 of this code.

60-69. Every court used in part for the purposes of a hazardous use unit and in part for any other purpose shall meet the most restrictive requirements in the building provisions of this code for a court for any of the purposes for which the building is designed, erected, altered or used.

Means of Exit

60-70. The requirements of chapter 67, relating to means of exit for industrial or storage units, shall apply to any hazardous use unit, except as otherwise provided in this part of this chapter dealing with means of exit.

60-71. In no case shall any path of exit travel from any point in any building to a way of departure outside of the building, pass directly in front of or immediately over any window, or other wall ventilating opening, or any sky-light or any opening in any vent flue for any hazardous use unit which is less than twenty-four feet distant therefrom; provided, however, that it shall be permissible for any means of exit to pass directly in front of or directly over any fire window or non-combustible door in any such hazardous use unit.

60-72. No point on any floor of any building which is a hazardous use unit, and no point on the floor of any room or other space which is a hazardous use unit located in any building of mixed use, shall be more than seventy-five feet from the center of an outside exit doorway, or from a doorway to a vertical means of exit, measured along the line of exit travel; provided, however, that such maximum distance of travel to an exit shall be less where so required by this part of this chapter dealing with means of exit.

60-73. Every room or space in a hazardous use unit shall have one or more exit doorways or other means of exit, according to floor area or size as follows:

One Exit Required. Any room or space, except as otherwise provided, having a floor area of three hundred square feet or less, or a maximum side or diameter of twenty feet or less, except an office or motion picture trial exhibition room, shall have one such exit not less than three feet wide. Any office or motion picture trial exhibition room having a floor area of six hundred square feet or less, shall have one such exit doorway not less than five feet wide; provided, however, that if such room is three hundred square feet or less in area, such exit doorway may be three feet wide.

Two Exits Required. Every film examining or repairing room of any size, and any room or space having a floor area of more than three hundred square feet, or a maximum side or diameter of more than twenty feet, and any office or motion picture trial exhibition room having a floor area of more than six hundred square feet, and any room now in existence or hereafter constructed, where dusts, vapors, gases or fumes are generated, as provided in section 60-108, shall have not less than two such exits, separated by a distance not less than the least dimension of any side of the room.

Exits from Floor Area. Every floor area containing any such room shall have not less than two exits from the story containing such room, and from every higher story, which shall be separated by a distance of not less than twenty-five per cent of the perimeter of the story within the floor area. [Amend. Coun. J. 5-11-54, p. 7442.]

60-74. Any vertical means of exit serving another occupancy shall not be combined for common use with a means of exit serving any hazardous use unit.

60-75. Every room in a dry cleaning building in which a flammable solvent having a flash point below one hundred forty degree Fahrenheit (closed cup tester) is used shall be provided with an exit directly to the outside of the building. Every door to such a room shall open outward. Any stairway for such a building shall be a smoke-proof tower or exterior stairway. There shall be no window or ventilating opening within five feet of any such stairway. An open balcony or runway leading to a stairway shall be considered as such means of exit, but there shall be no window or ventilating opening upon or below such balcony.

60-76. Every room used for the examining or repairing of motion picture films shall have not less than two exit doorways, located as required by section 60-73, and one of such exits shall lead directly to a vertical means of exit or to the outside of the building. Any such room shall not have any exit into or through another nitrocellulose products room, excepting a receiving, shipping or distributing room having such products in closed containers.

60-77. Every exit doorway from any motion picture trial exhibition room shall have a door or doors arranged to open only in the direction of exit and one such doorway shall open into a horizontal exit connection or a vertical means of exit, or directly to the outside of the building.

Windows and Ventilation

60-78. The requirements of chapter 66, relating to windows and ventilation in an industrial or storage unit, and the requirements of chapter 81 of this code, shall apply to a hazardous use unit, except as otherwise provided under this part of this chapter dealing with windows and ventilation.

60-79. Every standard fireproof cabinet shall be ventilated directly to the outer air by a metal duct having a cross-sectional area of not less than thirty-six square inches. The metal in the ventilating duct shall be non-corrosive or galvanized and not less than No. 18 U. S. standard gauge in thickness, with all joints riveted or welded. Such duct shall be covered with heat insulating material not less than one inch in thickness, which shall be protected on the outside by a continuous covering of sheet metal not less than No. 26 U. S. gauge in thickness. All such ventilating ducts shall be not less than nine inches from any combustible material and shall terminate in the open air with a clearance from other openings as required by section 60-80 for standard fireproof vaults. Each compartment shall be provided with a separate and independent vent duct.

60-80. Every standard fireproof vault shall have a vent flue or window opening directly to the outer air. Such vent flue termination or window shall be located not less than ten feet measured vertically or five feet measured horizontally from any fire door or fire window, or not less than twenty feet measured vertically, or ten feet measured horizontally, from any unprotected opening. Such window or vent flue shall have a net open area of not less than one square inch for each one cubic foot or fraction thereof of space in the standard fireproof vault. Nothing in this chapter shall be construed as prohibiting on each floor,

vent shaft connections from standard fireproof vaults into one vent shaft; provided, however, that not more than four such vaults on any one floor shall be connected to one such vent shaft. The area of the combined vent shaft shall be of such area as is required to vent the largest of the standard vaults for which said vent shaft provides ventilation. All vent flues or portions of vent flues shall have no inclination from the horizontal of less than forty-five degrees. Nothing herein shall be construed as preventing more than one window or vent flue or combination of windows or vent flues to provide the necessary ventilating area. Any such vent flue shall be used for no other purpose than to provide ventilation from standard fireproof vaults. Such vent flue shall be constructed of brick, tile or concrete walls not less than four inches in thickness, and no combustible material shall be used in the construction or support of flues. Any vent flue opening in a standard fireproof vault shall be in the ceiling or as close as practicable to the ceiling. The unobstructed opening into the atmosphere shall be not less in area than the area of the vent flues. Every vent flue furnishing the required ventilation shall be equipped with not less than a sixty minute fire-resistive door which shall be held normally closed, and such fire door shall have as its actuating mechanism a thermostatic releasing device to open the door. Such a door in the vent flue shall be so arranged that when the door is opened, the entire required area of the vent flue shall be available for ventilation purpose. All required windows shall be so provided with thermostatic releasing devices that a fire or an explosion in the vault shall cause such windows to open for the entire required ventilation area.

60-81. Every dry cleaning room shall have means of natural ventilation as required under section 60-86 for material heating rooms; provided, however, that the combined area of ventilating openings which shall have closures arranged to open automatically in case of explosion or fire shall be not less than twenty per cent of the floor area of the room. In addition to the natural ventilation required by this section, there shall be a mechanical ventilating system which shall exhaust air from the room as provided by chapter 81 of this code.

60-82. Rooms. All rooms in which class I or II flammable liquids are used in open vats, pans or other vessels, or in which any flammable liquids are heated or otherwise treated in such a manner as to produce flammable vapor, shall be ventilated as hereinafter provided. There shall be a vent opening in the wall at the floor line near each open receptacle and each heating device containing such liquid. Such vent openings shall have a net cross-sectional area of not less than thirty-two square inches and shall be protected with one-half inch mesh No. 16 wire. When such vent openings are not located in the outside wall of the building or room, there shall be a non-combustible vent flue built into the wall or floor or securely fastened thereto and so arranged as not to be subject to mechanical injury. Such vent flue shall conduct to and pass through an exhaust fan, which shall run continuously while the room is in use, and which shall be of sufficient capacity to change the air in the room completely in not more than five minutes. All discharge outlets of such vent flues shall be provided with non-corrodible wire screen and shall be so located that they are not nearer than ten feet vertically or five feet horizontally from any door or window opening.

Storage Tanks. Each above ground storage tank for flammable liquids, having a capacity of more than one hundred gallons, shall have in addition to safety valves required elsewhere, a vent opening provided with non-corrodible wire screen not less than thirty mesh per inch. The screens on such openings shall be so arranged that they can be removed but such screens shall be kept normally firmly attached to the frames of openings. The covers for manholes, handholes and gauge holes shall be made tight fitting. Every tank containing flammable liquids at atmospheric pressure, shall be provided with an open galvanized vent pipe, which shall be arranged for proper draining, or equipped with an automatically operated vent. The lower end of the vent pipe shall extend through the top of the tank not more than one inch. Vent openings shall be of sufficient area to permit the escape of air or vapors during filling operation, and such openings or pipe shall be not less than one inch in diameter. Such vent pipe shall terminate in a "goose-neck" or weatherproof hood, and the opening shall be screened with a non-corrodible wire screen of thirty mesh per inch, accessible for examination and removal. The termination of such vent pipe shall be outside of any building. The outer end of opening of a vent pipe shall be above the top

of the fill pipe and not less than three feet measured horizontally or vertically from any window or door opening or any other opening of a building; provided, however, that for Class I and Class II liquids, and for Class III liquids in tanks containing heaters, the opening of vent pipe shall be not less than twelve feet above the top of the fill pipe. Nothing herein shall be construed as prohibiting vent pipes leading into a common header where a battery of tanks contain the same class of liquid. In such case, individual vent pipes shall be provided with screen between tank and header, and the connection to the header shall be not less than one foot above the level of the top of the highest reservoir from which the tanks are filled.

60-83. Every fume or explosion hazard room shall have means of natural ventilation as required under section 60-86 for material heating rooms, except that the combined area of ventilating openings with closures arranged to open automatically in case of explosion or fire shall be not less than twenty per cent of the floor area.

60-84. Every hazardous chemical room and every grinding or dust producing room, shall have means of natural ventilation or vent flues as required by section 60-86 for material heating rooms; provided, however, that the combined area of ventilating openings which shall have closures arranged to open automatically in case of explosion or fire shall be not less than ten per cent of the floor area of the room, and the combined area of vent flues, in lieu of ventilating openings shall be not less than eight per cent of the floor area.

60-85. Japanning or enameling rooms, and paint mixing or spraying rooms shall have ventilation as required for such spaces by chapter 81 of this code.

60-86. Every asphalt, tar, pitch, resin or paraffin heating room, every highly flammable material storage room and every picker or shredder room shall be provided with one or more windows, skylights or other ventilating opening facing a public way, private alley, yard or other open space not less than fifteen feet wide, with closures arranged to open for natural ventilation and having a combined area of not less than five per cent of the floor area of the room. Not less than fifty per cent of the required combined area of openings which are arranged to open for ventilation shall be provided with sashes or dampers, or other closures, which shall be hung, overbalanced and held in place in such manner that an explosion or fire within the room will cause such sash, damper or closure to open for its full area; provided, however, that in lieu of such requirements it shall be permissible to provide a vent flue or flues extending directly to the outside air, which shall be used solely for the purposes of ventilating such room, which shall have a combined area of not less than four per cent of the floor area of the room, with an inclosure of the same fire-resistive value as is required for the inclosures of the room, and equipped with a normally closed non-combustible trap door arranged to open automatically in case of explosion or fire within the room. No such window, skylight, ventilating opening or vent flue required by this section shall be nearer than four feet, six inches to any other building or structure on the same premises or to any interior lot line.

60-87. Every motion picture trial exhibition room shall have ventilation as required by chapter 81 of this code for motion picture studios.

60-88. Every nitrocellulose products room shall have means of natural or mechanical ventilation as required by section 60-84 for hazardous chemical rooms.

60-89. Every room for the drying of articles or materials which will give off explosive or flammable vapors during the drying process shall have means of natural ventilation the same as required under section 60-86 for a material heating room, except that where there is a mechanical means of collecting and disposing of all such vapors produced in the drying room, the provisions of this section shall not apply.

Equipment

60-90. The requirements of this code relating to equipment in an industrial or storage unit shall apply to a hazardous use unit, except as otherwise provided under this part of this chapter dealing with equipment.

60-91. Every conveyor or duct between any hazardous use unit and any other building, or any other room in the same building, shall have an automatic closing non-combustible damper at each opening through any required fire separation, except as otherwise permitted under section 60-45. Every such damper for a conveyor shall meet the requirements of section 60-129.

60-92. All moving equipment, metal floors and railings, pumps, motors and machinery, in a hazardous use unit used for highly inflammable or explosive hazard materials shall be permanently and safely grounded to guard against static electricity sparks.

60-93. *Explosion-Proof Motors.* When electric motors are required in any room or hazardous use unit containing explosive or flammable vapors or atmosphere, or dust or gas, such motors shall be of types approved, for use in hazardous locations, as required by the electrical regulations of this code.

Other Motors. Any electrical motor, other than an explosion-proof motor, shall be located in a separate building, or separated by a standard fire separation from any room or hazardous use unit containing explosive or flammable vapors or atmosphere, or dust or gas.

Switches and Control Devices. Every electric switch or other control device in any room required by the first paragraph to have explosion-proof motors, shall be of a type approved for use in the presence of explosive or flammable vapors or atmosphere, or dust or gas.

60-94. No open flame or fire, no torch or other open light, no forge, stove, furnace, oven, boiler or similar device in which heat is generated or used and no electrical or similar device producing an exposed spark shall be permitted in any hazardous use building or room, except as otherwise permitted under this part of this chapter dealing with equipment.

60-95. Nothing in the provisions of this chapter shall be construed as preventing the carrying of any piping containing any substance having a temperature of two hundred twelve degrees Fahrenheit or less through any special room or hazardous use unit; provided, however, that such piping shall be installed with tight fitting sleeves to prevent the passage of any gas or vapor around such pipe through any enclosing walls, floors or ceilings.

60-96. Standard directional signs shall be provided for any hazardous use unit three stories or more in height as required by chapter 67 of this code.

60-97. Heating in rooms and buildings used for the storage and handling of flammable liquids of classes I, II and III, having a flash point of less than one hundred degrees Fahrenheit, shall be by steam and hot water only. Fire walls shall surround all boiler rooms, furnace rooms and other rooms containing exposed fire, electric dynamos, motors, switches or other spark producing devices.

60-98. Every dip tank or vat for use with a volatile flammable liquid or with a liquid containing any volatile flammable substance in solution or suspension, shall be provided with a close fitting top. If the use of the tank or vat requires that it be kept open, the top shall be arranged to close automatically in case of fire, except as otherwise provided in section 60-127. Every such dip tank or vat shall be provided with a drain pipe whereby its contents may be drawn off to the required liquid storage tank when such tank or vat is not in use.

60-99. *No Connections to Drains.* There shall be no floor drains or other connections to the city sewer system from a tank or any room or compartment in which flammable liquids are stored or used.

Valves in Drawing-off Pipes. All drawing-off pipes terminating inside of any building, shall have valves at the discharge end, and when delivery is by gravity

such pipes shall have an automatically closing type shut-off valve and an emergency valve.

Valves for Above Ground Tanks. All above ground tanks shall have a valve in the pipe leading from such tank which shall be located not more than ten feet from the tank. Where there are two or more tanks cross-connected to a common header there shall be a valve in each cross-connection.

Pumps. Pumps delivering to or taking supply from an above ground storage tank shall be provided with valves on both suction and discharge side of pump.

Pipe Drain to Tanks. Where underground tanks are used, all pipe carrying flammable liquid shall pitch toward the tanks without traps or pockets and such pipes shall enter the tanks at the top.

Requirements for Pipe. Where the working pressure is less than one hundred pounds, all pipe used in systems for transferring flammable liquids shall be of the standard full weight, wrought iron, steel or brass type. Where the working pressure is in excess of one hundred pounds per square inch, extra heavy pipe and fittings shall be used. No pipe less than one-half inch internal diameter shall be used. Outside pipe shall be rigidly supported.

Pipes in Rooms Containing Open Flames. Pipes carrying class I or II flammable liquids, unless such pipes are without threaded joint or connections, shall not extend into or pass through any rooms which contain open light or fire.

60-100. For Pumps. In systems using pumps to supply flammable liquids to internal combustion engines, fuel oil burners or other devices, a pressure relief valve shall be installed in the supply line to such devices. Pressure relief valves shall be so arranged as to return surplus oil to the supply tank.

Emergency Relief for Excessive Internal Pressure. No form of emergency relief construction shall be required for vertical tanks which have conical roofs with a slope of less than two and one-half inches in twelve inches and where the strength of the joint between the roof and the shell is no greater than that of the weakest vertical joint in the shell. Every other above ground tank used for the storage of flammable liquids shall have emergency relief construction. In tanks where entire dependence for relief is placed upon some form of emergency relief construction other than a weak seam, such emergency relief construction or safety valve shall be adequate to relieve the excessive pressure due to external heat. The net cross-sectional area of such additional safety vent shall be not less than twenty-four square inches for any tank of twenty-one thousand gallons capacity or less and not less than seventy-eight square inches for any tank of more than twenty-one thousand gallons capacity.

60-101. Filling Pipe. The end of the fill pipe for underground storage tanks for class I or II flammable liquids shall be carried to a location outside of all buildings and shall be more than five feet from any door or window opening. The fill pipe shall be closed by a screw cap or fill cap which shall be kept locked except during the filling operation.

Standard Filling Hose. All hose used for the transferring of flammable liquids shall be of the metal lined type, or of the type embodying wire wound within the fabric of the hose, and thoroughly bonded to the coupling connection at each end of hose.

Deliveries to Tanks. Deliveries of flammable liquids of class I and class II shall be made directly to the storage tank through the fill pipe by means of a hose or pipe connected to the fill pipe in the barrel, container, tank, wagon or tank car from which such liquid is being drawn.

Pumps Required. Flammable liquids shall be drawn from tanks by pumps or other systems, which shall be equipped with controlling apparatus and pipe shall be so arranged as to control the quantity of discharge and to prevent leakage or discharge inside of the building by any derangement of the system. When located inside a building, the pump or other drawing off device shall be located on or above the ground floor in a well ventilated place.

Gravity Feed Prohibited. No tanks, drums or other containers, holding flammable liquids within a building or discharging within a building, shall be provided with any faucet or other bottom drawing device. Pipes shall not

terminate at any point lower than the level of the source of supply. Nothing in this chapter shall be construed as prohibiting the storage or gravity flow or both storage and gravity flow of flammable liquids when such liquids are used in connection with old burning equipment, or in refineries or in manufacturing and jobbing plants and in stores, plants and establishments; provided, however, that tanks holding class I or II flammable liquids shall be in a room constructed and arranged as provided by section 60-51 for a special room for flammable liquids.

60-102. Kettles, Vats, Vessels. Kettles, vats, saturators and other vessels used in manufacturing processes and which have a capacity of more than five gallons of flammable liquids shall not be located within five feet of combustible material, nor within five feet of any exit. All combustible floors within ten feet of such containers shall be protected with a non-combustible covering. All kettles and other open containers shall be provided with substantial covers arranged to close automatically by heat actuated devices, or shall be provided with equipment to flood such tank with standard foam solution fire extinguisher, or a standard dry powder fire extinguisher, or an approved carbon dioxide extinguisher as defined in chapter 90 of this code.

Storage in Containers. The storage of flammable liquids within buildings shall be as given in this paragraph; provided, however, that in a special room for flammable liquids, unlimited quantities of class II or III flammable liquids may be stored therein.

(1) *In Buildings of Type IV-A or IV-B Construction.* Class I or II liquids, in sealed containers or safety cans of not more than one gallon capacity, not exceeding a total of five gallons. Class III liquids, maximum limit of any tank or container, sixty gallons, except as otherwise permitted in sections 60-52 to 60-54, inclusive.

(2) *In Other Buildings.* Class I liquids, in sealed containers or safety cans not more than one gallon capacity, not exceeding a total of ten gallons. Class II liquids in sealed containers or safety cans of not more than five gallons capacity or in barrels, drums or tanks not more than sixty gallons capacity. Class III liquids in sealed containers of not more than five gallons capacity, in barrels, drums and tanks not exceeding one hundred twenty gallons capacity except as otherwise permitted in sections 60-52 to 60-54, inclusive.

(3) *Paint and Lettering.* Portable containers of a capacity of ten gallons or less, used for storing class I or II flammable liquids, shall be painted red, or shall be painted with a conspicuous band or stripe of red. Such containers shall be conspicuously lettered in black with the following words: "DANGEROUS—KEEP LIGHTS AND FIRES AWAY." Portable containers, used for storing class III flammable liquids shall be painted blue, or shall be painted with a conspicuous band or stripe of blue. Such containers shall be conspicuously lettered in white with the following words: "DANGEROUS—KEEP LIGHT AND FIRE AWAY."

Storage Cabinets. Where the total quantity of flammable liquids stored is more than ten gallons and less than fifty gallons, and no individual container exceeds five gallons capacity, storage cabinets constructed as follows shall be required: Bottom, top and sides of cabinet shall be made of sheet iron, not less than No. 18 gauge in thickness. Said cabinet shall be double walled, with not less than one and one-half inches air space. Joints shall be riveted or welded. Doors shall be of a construction equivalent to walls and shall be provided with a 3-point lock. Door sill shall be raised not less than two inches above the bottom of the cabinet. The cabinet shall be conspicuously labeled in red letters:

"FLAMMABLE—KEEP FIRE AWAY."

60-103. Nothing in the building provisions of this code shall be construed as prohibiting the use of flammable liquid reclaimers or recovery systems, the capacity of which is less than ten gallons per hour and which equipment shall not heat the liquid above five hundred degrees Fahrenheit, and which shall have no open flame. Such devices shall be arranged so that all gasoline and kerosene and similar vapors which are removed from the oil, shall be condensed and collected in a closed vapor tight container.

60-104. All gasoline gauging or vending devices shall be of substantial construction and firmly secured to concrete or masonry foundations, which shall be so located and designed as to prevent motor vehicles damaging such devices. Systems wherein continuous pressure is maintained on the gasoline storage tank in connection with gauging or vending devices shall not be permitted. The use of above ground gasoline storage tanks, or tank cars or tank trucks, in connection with gasoline vending or gauging devices, shall not be permitted. Devices which discharge by gravity shall be so designed that it shall be impossible to retain in the gauging compartment more than ten gallons of liquid. Such devices shall be so arranged that it shall not be possible to lock the device without draining the gauging compartment.

60-105. Every boiler in a dry cleaning building in which a flammable solvent having a flash point below one hundred forty degrees Fahrenheit (closed cup tester) is used shall be located in a separate building, or shall be separated by a fire wall from every dry cleaning room. The boiler shall be so situated that the line of travel for gases between it and the nearest opening into any dry cleaning room shall be not less than twenty feet. In every dry cleaning building all heating shall be by steam or hot water pipes, equipped with guards as provided under section 60-106 for a standard drying room.

60-106. All steam or hot water pipes in every standard drying room, and in every drying room for any article or material which will give off explosive or flammable vapors during the drying process, shall be carried on non-combustible supports and shall be provided with non-combustible guards so arranged as to maintain a clear space of not less than six inches between such pipes and any article or material which is being dried. Where textiles, clothing or similar articles are dried, such guards shall have openings not more than one-half inch in width. Any wire or sheet metal used in such guards shall be not less than one-eighth inch thick, and where the articles or materials being dried are heavy or are handled in carts, trucks, or other conveyors, the required guards shall be of sufficient strength to withstand such impacts and pressure as may be imposed upon them. No steam or hot water pipes shall be located less than six inches from the floor at any point. Provisions shall be made for the cleaning of all lint, dust, waste and refuse from around steam and hot water pipes.

Any opening for the admission of hot air to a drying room shall be protected by a metal screen or grille with openings not more than one-half inch in width. The metal of any such screen or grille shall be not less than one-eighth inch thick. No such opening for the admission of hot air shall be nearer than six inches to the floor at any point.

Any stove in a drying room shall be provided with a standard furnace foundation. Any stove or electric heating device in a drying room shall be provided with a metal guard so arranged as to maintain a clear space of at least six inches between said stove or electric heating device and any material or article which is being dried, which shall conform in all respects to the requirements of this section for guards around steam or hot water pipes.

60-107. Every conveyor, duct and spout between a grain bleacher and any grain elevator or other building shall be enclosed in a casing constructed of non-combustible material. Conveyors, ducts and spouts shall have an automatic closing fire damper at each end, having a fire-resistive value of not less than forty-five minutes. Every sulphur burning furnace for a grain bleacher shall be so located that the length of the sulphur fumes pipe will not be less than twenty-five feet, and every such furnace shall be separated by a distance of not less than twenty-five feet from any grain elevator, and from any other building except a grain bleacher.

60-108. Every existing grinding or dust-producing room and every grinding or dust producing room hereafter constructed shall have mechanical means of collecting and disposing of the lint, dust, shavings or other fine particles of matter produced therein, and the heating of such room shall be by steam or hot water pipes, equipped with guards as provided under section 60-106 for a drying room. Every such means of collecting dust shall be provided with a dust arrester, collector or precipitator, which will prevent the exhausting of particles of matter heavier than air into the atmosphere.

1. General.

(a) Where grinding, polishing, buffing, scratch brushing or abrasive, cutting-off wheels, grinding and polishing straps or belts are used in operation producing metallic dust, there shall be provided in the area where dusts, vapors, gases or fumes are generated, hoods that are connected to exhaust systems which will remove such dusts, vapors, gases or fumes, and such exhaust systems shall be operated continuously during any such operations on aforesaid equipment and such exhaust systems shall be provided with dust arresters, collectors, separators or precipitators to collect the dust before the air or gases from such exhaust systems are discharged therefrom.

(b) All exhaust systems used to collect metallic dust such as aluminum, magnesium or zinc shall be provided with an interlocking electrical control connected to the exhaust fan motor and the electric power source for running polishing, buffing and grinding machines. The interlock shall be so designed that in the event of a power failure in connection with the exhaust fan, it will cut out the power source controlling the polishing, buffing and grinding equipment. In the event a wet-type dust collector is made use of, additional interlocking electrical controls should be provided in connection with the water supply, and should be so designed and installed that in the event of a water flow failure or inadequate liquid level, there will be an automatic cut-out of the power sources controlling the exhaust fan and the polishing, buffing and grinding equipment.

(c) All exhaust systems intended for the removal of potentially explosive dusts, other than those containing magnesium, shall be provided with either a wet-type dust or a dry-type separator.

(d) In instances where the dusts consist principally of magnesium or its alloys, a wet-type collector shall be provided. The exhaust fan shall be on the clean air side of the collector.

(e) All dry-type separators shall be located on the outside of the building. The exhaust duct leading to the separators shall be of the shortest possible length.

(f) The exhaust discharge from all dust arresters, collectors, separators or precipitators shall be direct to out-of-doors and at such a point to preclude the possibility of the re-entry of the exhaust air into the building or adjacent buildings.

(g) The dust removed in dry-type separators shall be discharged into enclosures, bins or receptacles, located on the outside of the building. Their construction shall be of non-combustible materials; clean-out doors shall be provided. Explosion relief vents shall be provided having a net open area of not less than one square inch for each 0.7 cubic foot or fraction thereof. Such vent flue shall be located not less than ten feet measured horizontally or vertically from any wall, roof or opening.

(h) Exhaust carrier duct systems shall be cleaned at least once a week. Dust collector enclosures or bins and wet-type collector sludge tanks shall be cleaned daily. The deposits shall be removed from the premises and disposed of in a safe manner. Under no circumstances shall dry particles and/or sludge be discharged into the sewer. Written records of cleaning operations shall be maintained on the premises and shall be open for examination at all times.

2. Exhaust System Design Requirements:

(a) All branch pipes shall enter the header pipe at an angle of forty-five degrees or less. All bends, turns or elbows used in exhaust pipes shall be made with a throat radius of two pipe diameters except greater or smaller throat radii may be used to clear obstructions.

(b) All branch pipes shall connect with a header pipe. The area of the header pipe at any point shall not be less than the combined areas of the branch pipes joining it between such point and the small end of the header. Such header pipes shall be connected to an exhaust fan to produce a minimum air velocity in the branch pipes of 4,500 feet per minute or such greater air velocity reasonably required to remove dusts, vapors, gases or fumes generated. Where cradles are used for handling the parts to be ground, polished or buffed, or where swing grinders are used, and large partial enclosures to house the complete operation are required, the opening in such enclosures shall have a minimum average air velocity of 200 feet per minute and shall be connected to branch pipes of an exhaust system of such area as to produce a minimum air velocity of 4,500 feet per minute in the branch pipes.

(c) Dust shall be removed by means of suitable mechanically exhausted hoods or enclosures at each operation. Such hoods shall be so designed, located and placed that the dust or dirt particles will fall or be projected or drawn into the hoods in the direction of the air flow. No wheels, discs, straps or belts shall be operated in such manner and in such direction that will cause the dust and dirt particles to be thrown into the operator's breathing zone.

(d) The exhaust outlet of the hoods and the branch pipes connected thereto, of grinding wheels on floor stands, pedestals, benches, swing frames and special purpose grinding machines and abrasive cutting-off wheels shall have not less than the following minimum inside diameter:

Size of grinding or abrasive cutting-off wheel—inches	Minimum inside dia. of hood outlet and branch pipe (inches)	Maximum wheel surface (Sq. In.)
Up to 9" dia. incl. not over 1½" thick	3	43
Over 9" to 16" dia. incl. not over 2" thick	4	101
Over 16" to 19" dia. incl. not over 3" thick	4½	180
Over 19" to 24" dia. incl. not over 4" thick	5	302
Over 24" to 30" dia. incl. not over 5" thick	6	472
Over 30" to 36" dia. incl. not over 6" thick	7	679

(e) The exhaust outlet in the hood and branch pipes connected thereto of brush wheels over 6" in diameter and all buffing and polishing wheels mounted on floor stands, pedestals, benches or special purpose machines shall have not less than the following minimum inside diameter:

Size of buffing, poshing and scratch brush wheel—inches	Minimum inside dia. of hood outlet and branch pipe (inches)	Maximum wheel surface (Sq. In.)
Up to 9" dia. incl. not over 2" thick	3½	57
Over 9" dia. to 16" dia. incl. not over 3" thick	4½	151
Over 16" dia. to 19" dia. incl. not over 4" thick	5	239
Over 19" dia. to 24" dia. incl. not over 5" thick	5½	377
Over 24" dia. to 30" dia. incl. not over 6" thick	6½	565

(f) In case a grinding, polishing, buffing or scratch brushing wheel is thicker than given in the tables set out herein, the diameter of the hood outlet and branch pipe connected thereto shall not be less than called for by its wheel surface.

When the grinding, polishing, buffing or scratch brushing wheel surface exceeds 679 square inches, the inside area of the hood outlet and branch pipe

connected thereto shall be increased in size in the ratio of one square inch of opening to 17 square inches of wheel surface.

(g) Grinding wheels or discs for horizontal single spindle disc grinders shall be hooded to collect the dust or dirt generated by the grinding operation and the hoods shall be connected to branch pipes of the following minimum diameters:

Size of wheel or disc—inches	Minimum inside dia. of hood outlet and branch pipe (inches)
Up to 12" diameter	3
Over 12" to 19" dia. incl.	4
Over 19" to 30" dia. incl.	5
Over 30" to 36" dia. incl.	6

(h) Grinding wheels or discs for double spindle disc grinders shall have a hood enclosing the grinding chamber and such hood shall be connected to one or more branch pipes of the following minimum diameters:

Size of wheel or disc—inches	Minimum number and inside diam. of hood outlet and branch pipe (inches)
Up to 19" dia. incl.	1 pipe—5"
Over 19" dia. to 25" dia. incl.	1 pipe—6"
Over 25" dia. to 30" dia. incl.	1 pipe—7"
Over 30" dia. to 53" dia. incl.	2 pipes—6"
Over 53" dia. to 72" dia. incl.	4 pipes—8"

(i) Grinding wheels or discs for vertical single spindle disc grinders shall be encircled with a hood to remove the dust generated in the operation and such hoods shall be connected to one or more branch pipes of the following minimum inside diameters:

Size of disc—inches	Minimum number and inside diam. of hood outlet and branch pipe (inches)
Up to 20" dia.	1 pipe—4½"
Over 20" dia. to 30" dia. incl.	2 pipes—4"
Over 30" dia. to 53" dia. incl.	2 pipes—6"
Over 53" dia. to 72" dia. incl.	2 pipes—8"

(j) Grinding and polishing straps and belts shall be provided with hoods to remove dust or dirt generated in the operation and such hoods shall be connected to branch pipes of the following minimum inside diameters.

Strap or belt size—inches	Minimum inside diameter of hood outlet and branch pipe (inches)
Up to 2" wide	3"
Over 3" wide—	For each 2" or fraction thereof increase in strap or belt width add ½" or fraction thereof to the hood outlet and branch pipe size.

In instances where potentially explosive dusts are removed, an additional branch pipe connection shall be provided at each point of rotational direction change.

(k) Cleanout openings shall be provided in all horizontal runs of ducts, at 10 feet intervals, at such other points as will permit proper cleaning, and wherever dust settlement is likely to occur, such as near bends, pipe junctions and vertical duct risers. Cleanout openings shall be of a size that will permit ready access to the duct interior. Wherever practical, cleanout openings should be located on the under side of the ducts. Removable caps shall be provided at all horizontal duct tail ends.

(1) (1) Branch pipe junctions to main pipe shall be made at an angle not greater than 45° and should for least resistance and best practice, be 30° or less, measured on the center line of the two pipes.

(2) Junctions shall be made at the side or top of the larger end of a transformation piece, except that for specific reasons of balancing the flow, junction may be made with the main pipe section of uniform pipe diameter.

(3) Transformation Pieces. Transformation pieces shall be tapered at an included angle not greater than 30°. Transformation pieces shall increase in area by an amount necessary to maintain the air velocity required in the system, and shall be constructed of material equal in gauge to the material of the connecting pipe at the large end.

(m) (1) Materials of Construction. All pipes shall be constructed of not less than the following gauges of metal, or other non-combustible and moisture resisting material of equivalent strength:

Diameter of Pipe—Inches	U. S. Standard Gauge
Up to 8" inclusive	20
Over 8" to 18" incl.	18
Over 18" to 30" incl.	16
Over 30"	14

(2) Elbows and Bends. All elbows and bends shall be made from material at least two gauges heavier than is required for straight piping of the same diameter, except that for No. 14 gauge and heavier, the elbows and straight pipe may be of the same gauge.

(3) Material. Exhaust piping shall be of galvanized or painted black sheet iron or other non-combustible materials of required strength, corrosion and abrasion resisting properties.

(3) Compliance with mechanical exhaust test requirements shall be determined in accordance with sections 81-20, and 81-21.

(4) Pre-Cleaning Metallic Surfaces.

All metallic parts, prior to being subjected to grinding, polishing or buffing processes, shall be thoroughly cleansed of all adhering oils, greases, and corrosion protective materials. All parts surfaces shall be free of solvents before being subjected to grinding, polishing or buffing operations. Every tank or vat containing a volatile flammable cleaning solvent shall be provided with an automatically closing close-fitting cover.

(5) Electrical Controls.

All electrical controls shall be installed as provided in chapter 88 of this code.

Any person violating any provision of this section shall be fined not more than two hundred dollars or imprisoned for not more than six months, for each offense. [Amend. Coun. J. 5-11-54, p. 7442.]

60-109. Foundations. Every oven, for the baking of japan or enamel work, located on a combustible floor, shall be provided with a standard furnace foundation, meeting the requirements of section 80-8.

Separation of Baking Compartment and Fire Chamber. If direct heat is used, the baking compartment of the oven shall be cut off from the fire chamber and smoke flue by a tight non-combustible partition, and provisions shall be made to keep the flame at such distance from such partition as will preclude the possibility of igniting the fumes in the baking compartment.

Metal Oven Construction. The walls and ceiling of every metal oven shall consist of an inner and outer shell of metal not less than three-eightieths inch thick, with riveted or welded seams and joints, secured to a rigid framework of suitable iron or steel shapes. The inner and outer metal shells shall be separated not less than one and one-half inches, the space between being filled solid with fused non-combustible insulating material not less than one and one-fourth inches thick.

Brick Oven Construction. Every brick oven shall have walls and ceiling at least four inches in thickness and shall be provided with a metal door not less than five sixty-fourths inch in thickness.

Open Ventilation and Relief Covers. Every japanning or enameling oven shall have a vent pipe of iron or steel, not less than one-thirty-second inch thick with riveted or welded seams and joints, or formed of a compressed mixture of asbestos fiber and Portland cement or as provided by chapter 63 of this code for smoke flues and chimneys.

Clearances. No part of any oven inclosure or oven flues shall be located nearer to any combustible construction than is permitted under chapter 63 of this code for low pressure boiler breachings.

60-110. Only steam or hot water shall be used for heating a kiln or room for the drying of lumber.

60-111. A nitrocellulose products room shall be heated by hot water or steam, by either direct or indirect means. Any steam radiator or steam pipe, in which the working pressure exceeds five pounds per square inch, shall be located not less than four feet from the floor. Every steam or hot water radiator or pipe which is less than four feet from the floor, or which is so located that any nitrocellulose material or waste might come in contact with it, shall be protected by a guard of No. 18 U. S. gauge galvanized wire screen of one-fourth inch mesh. Such guard shall be not less than three inches from the radiator or pipe at all points, and the tops, if any, shall slope at an angle of not less than forty-five degrees from the horizontal so as to prevent the use of the tops as shelves. No floor register shall be used with any indirect system of heating, and no wall register shall have an opening nearer than six inches from the floor. Every furnace or other equipment for the heating of air in an indirect system shall be located in an independent room separated from every nitrocellulose products room by not less than two hour fire-resistive construction.

60-112. In every paint mixing or spraying room and every picker or shredder room, all heating shall be by steam or hot water radiation equipped with guards as provided under section 60-106 for a standard drying room.

60-113. In every motion picture trial exhibition room, seats provided for spectators shall be fixed seats.

60-114. Every rack, hangar, trolley, rail, groove or other piece of equipment in any smoke house or smoke room shall be of non-combustible material.

Danger Signs

60-115. Every fume or explosion hazard building and every fume or explosion hazard room shall have the words "DANGER—POISONOUS GAS" where any fume hazard gas occurs, or the words "DANGER—EXPLOSIVE GAS" where any explosion hazard gas occurs, painted in a conspicuous position on the outside of every entrance thereto; provided, however, that no such sign shall

be required for any building or room in which not more than two standard cylinders of such gas are present at any time. Every such sign shall meet the requirements of section 60-117 for lettering.

60-116. Every building or room or above ground tank for the use or storage of flammable liquids, and every building or room for highly flammable materials, shall have the words "FLAMMABLE—KEEP FIRE AWAY" painted in a conspicuous position on the outside thereof, with letters as required by section 60-117.

60-117. Every hazardous chemical room and every hazardous chemical storage building shall have the words "HAZARDOUS CHEMICALS—USE NO WATER" painted in a conspicuous position on the outside of every entrance door thereto. Such wording shall be in plainly legible bright red letters on a white background with letters not less than six inches high and with the principal strokes thereof not less than three-fourths inch in width.

60-118. All exterior walls of every magazine shall be painted bright red. The words "MAGAZINE—DANGER" shall be painted in a conspicuous position on the front wall of every magazine.

60-119. Every valve required for the control of the discharge of steam through a steam fire line into any dry cleaning room and every valve required for the control of the discharge of steam through a steam jet in a picker or shredder room, shall be marked with a metal sign which shall bear the words "STEAM FIRE LINE." Every such sign shall meet the requirements of section 60-117 for lettering.

Fire Protection

60-120. The requirements of this code relating to the fire protection of an industrial or storage unit, shall apply to a hazardous use unit, except as otherwise provided under this part of this chapter dealing with fire protection.

60-121. General. A standard system of automatic sprinklers, meeting the requirements of chapter 91 of this code, shall be installed in every building or part of a building, hereafter designed, erected, altered, or converted for the purposes of the following occupancies:

Asphalt, tar, pitch, resin and paraffin heating rooms.

Drying rooms for articles or materials which give off explosive or flammable vapors during the drying process whether or not a collection and disposal system is provided for such vapors.

Fume or explosion hazard buildings of heavier timber or ordinary construction.

Grinding or dust producing rooms.

Highly flammable material storage buildings and rooms.

Japanning or enameling rooms.

Nitrocellulose products building and rooms.

Paint mixing or spraying rooms.

Picker or shredder rooms.

Rooms for storage or baling of waste paper.

Industrial properties with occupancies such as:

Artificial flowers.

Artificial leather.

Carpet linings.

Cotton clothing.

Cotton batting.

Cotton rag sorting.

Cotton waste.

Feather renovating.

Shoddy mills.

Straw goods.

Woodworking with dipping or varnishing.

and such other occupancies as shall be determined to be in fact of high hazard by the commissioner of buildings, in accordance with the true meaning and intent

of this section and consistent with the occupancies definitely fixed as hazardous use units; provided, however, that if the non-hazardous areas of any building in which such an occupancy occurs, are separated from the hazardous use area by a fire wall, it shall be permissible to omit such sprinkler system from the non-hazardous areas; and provided further, that where required under other paragraphs of this section, every floor area above the lowest floor area in which certain hazardous use units occur, shall be equipped throughout with a standard system of automatic sprinklers; and provided also, that no sprinkler system shall be required in any vault used for the storage of files, records and other non-hazardous documents.

Where Prohibited. No sprinkler system shall be permitted in any hazardous chemical room or in any hazardous chemical storage building, where the presence of water would add to the hazard.

Fume or Explosion Hazard. No sprinkler system shall be required for any fume or explosion hazard building of Type IA, IB or IC construction, nor for any room intended for the storage and use of chlorine gas for no purpose other than the operation of a water purification plant or refrigerating unit, nor for any unit of non-combustible construction used exclusively for the production of manufactured gas.

Highly Flammable Material Storage. Every fire area containing any highly flammable material storage room shall be equipped throughout the story containing such room and throughout every higher story with a standard system of automatic sprinklers; provided, however, that if such room is designed, erected, altered or converted for the purposes of storing in baled condition only, not more than five thousand pounds of any highly flammable material as described under section 60-2 then such a sprinkler system shall be required in such room only.

Nitrocellulose Products Rooms.

(1) *General.* Every fire area containing a nitrocellulose products room shall be equipped throughout the story containing such room and throughout every higher story, with a standard system of automatic sprinklers.

(2) *Drying Boxes.* Every box for the drying of nitrocellulose products shall be provided with one automatic sprinkler head for each sixty cubic feet of volume.

(3) *Film Examining and Repair Rooms.* Every room intended for the examination or repair of motion picture films shall be provided with not less than one automatic sprinkler head for each twenty-five square feet of ceiling area, so spaced that the distance between the adjacent heads shall not exceed five feet, six inches. Where the distance between heads is less than four feet, ten inches, baffle plates of sheet metal not less than one-fortieth inch thick shall be provided midway between adjacent heads and shall extend six inches below the level of the deflectors on the heads. Where nitrocellulose products are stored on shelves, there shall be one sprinkler head directly over the aisle in front of each section of shelving. Baffle plates shall be provided between such heads in the same manner as required for other heads in the room.

(4) *Receiving, Shipping, and Distributing Rooms.* Every receiving, shipping or distributing room for nitrocellulose products shall be provided with not less than one automatic sprinkler head for each fifty square feet of ceiling area, so spaced that the distance between adjacent heads shall not exceed seven feet, six inches.

60-122. A standard system of standpipes meeting the provisions of chapter 92 of this code shall be installed in every hazardous use unit which is more than eighty feet in height; provided, however, that such a standpipe system shall be installed in every cereal, feed, flour, grist or starch mill, malt house or similar building which is more than two stories in height.

60-123. Types. Standard fire-extinguishers, as defined in section 90-20 shall be of the types suited to types of fire hazard in accordance with the following provisions:

(1) Only dry powder extinguishers shall be installed where grain bleaching processes employing sodium peroxide and sulphur are carried on, wherever

calcium carbide is present and wherever the introduction of water would create an added hazard.

(2) Only foam type, carbon tetrachloride or carbon dioxide extinguishers shall be installed in dry cleaning rooms and spaces where flammable liquids are present.

(3) Extinguishers containing a soda-acid or other aqueous solution may be installed elsewhere; except that in hazardous chemical rooms the nature of the chemical contents of such rooms shall determine the extinguisher solution.

(4) Only carbon dioxide or other non-conducting agent shall be used in extinguishers installed for use upon fires in electrical equipment.

Requirements. Standard fire-extinguishers shall be installed in every room or space classified as a hazardous use unit as follows:

One standard fire-extinguisher in each room or space of two thousand square feet or less of floor area and one additional standard fire extinguisher for each additional two thousand square feet of floor area or fraction thereof; provided, however, that the distance from any point to the nearest extinguisher shall in no case exceed fifty feet.

60-124. Every fireproof metal cabinet and every compartment therein shall be equipped with one standard automatic sprinkler head. The pressure on the water supply to the sprinkler head shall be not less than ten pounds per square inch.

60-125. Every standard fireproof vault shall be equipped with a standard system of automatic sprinklers, with one standard automatic sprinkler head for each seventy-five cubic feet or fraction thereof of space in such vault. No. 24 U. S. gauge galvanized iron baffle plates reinforced with rolled bottom edge shall be attached to and suspended from the ceiling of the vaults, which shall be so arranged that they shall be midway between adjacent heads and shall extend six inches below the level of the deflectors on the heads.

60-126. In any plant for the manufacture of acetylene gas, provisions shall be made for the disposal of the residuum of calcium carbide outside the building and without discharging into any drain or sewer.

60-127. If a standard foam-type automatic fire extinguisher is placed immediately over or adjacent to a dip tank or vat used with any flammable liquid, and such extinguisher is so arranged that a fire shall automatically cause the foam to flow into the vat or tank, the cover required by section 60-98 for such a tank or vat, may be omitted.

60-128. Steam Fire Lines. Every dry cleaning building in which a flammable solvent having a flash point below one hundred forty degrees Fahrenheit (closed cup tester) is used shall be provided with a high pressure steam boiler having a capacity of one horsepower for each one hundred cubic feet contained in the largest dry cleaning room in the building. Such boiler shall be arranged and equipped to permit a steam pressure of not less than thirty pounds per square inch being maintained at all times during which dry cleaning operations are carried on in the building. Each dry cleaning room in the building shall be connected to such boiler by a steam pipe of not less than one and one-half inch diameter, either by a direct line to each room, or by a main or mains with branches. Where any such main or branch line passes through a wall it shall be equipped with a tight fitting journal solidly built into the wall construction. Discharge pipes shall be provided near the ceiling in each drying room, at intervals of not more than ten feet over the entire ceiling area, and in addition there shall be provided one discharge pipe near the ceiling over each washer and each extractor located or provided for in the room. Each such discharge pipe shall be at least two inches long and shall be directed downward. The discharge of steam into each drying room shall be controlled by a valve located outside the building.

Water Tanks. There shall be an open tank not less than four feet long, two feet wide, and three feet deep near the entrance to every dry cleaning room, which shall be so arranged and equipped that it may be kept filled with water to within four inches of its top at all times.

60-129. Every conveyor and spout between a grain bleacher and any other building shall be provided with a damper at each end. Such dampers shall be of construction having a sixty minute fire-resistive value, and shall be so arranged and equipped as to close automatically in case of fire by the release of a fusible link or by the actuation of a standard thermostatic releasing device.

60-130. Where a supply of steam at not less than five pounds pressure is available, a steam jet shall be installed in every picker or shredder room with a control valve outside of the room. Where such a supply of steam is not available, a standard two and one-half gallon fire extinguisher shall be kept outside the entrance door to every such room and adjacent thereto, with an opening twelve inches square provided through the inclosure of the room, through which the nozzle of the extinguisher may be directed into the room. Such opening shall be provided with a non-combustible cover, removable from the outside.

Artificial Lighting and Exit Signs

60-131. The requirements of this code, relating to artificial lighting and exit signs in an industrial or storage unit shall apply to a hazardous use unit except as otherwise provided in this part of this chapter dealing with artificial lighting and exit signs.

60-132. All artificial lighting in the following occupancies:

Cereal, feed, flour, grist or starch mill.

Dry cleaning building.

Fume or explosion hazard room.

Grain elevator, malt house or similar building.

Grinding or dust producing room.

Highly flammable material storage building or room.

Japanning or enameling room.

Magazine.

Nitrocellulose or nitrocellulose products building or room.

Paint mixing or spraying room.

Picker or shredder room.

Drying room for any article or material which will give off explosive or flammable vapors during the drying process

shall be by electric lights protected by vapor-proof globes and wire guards. Switches for the control of such lighting shall be located outside the building or room, or shall be oil switches or other types suitable for use in the presence of explosive or flammable vapors. There shall be no switches or receptacles for extension cords in any such building or room, except types approved for use with explosive vapors.

60-133. Every vertical means of exit required under that part of this chapter dealing with means of exit from any story for which two exits are required shall have a standard exit sign as required by chapter 67.

60-134. Any lighting in a standard fireproof vault shall be by electricity only. The light shall be controlled by an indicating switch located on the outside of the vault. All such lights shall be equipped with wire guards, keyless sockets, and vapor-proof globes.

MISCELLANEOUS BUILDINGS AND STRUCTURES

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61-1. Buildings defined in section 48-11 as Miscellaneous Buildings and Structures shall comply with all structural and other applicable requirements of this code with the special requirements of this chapter.

61-2. Outdoor signs shall comply with all applicable provisions of this code and with the special provisions of sections 61-2.1 to 61-2.6, inclusive, and chapter 86.1.

61-2.1. For the purposes of this code, certain terms are hereby defined as follows:

(a) *Outdoor signs* shall include all fabricated signs and their supporting structures erected on the ground or attached to or supported by a building or structure.

(b) *An open sign* is a sign in which the area of any surface exposed to the wind does not exceed fifty per cent of the aggregate area of the sign.

(c) *A ground sign* is a sign supported by uprights or braces on the ground.

(d) *A roof sign* is a sign erected on the roof of a building.

(e) A *wall sign* is a sign which is attached to a wall of a building and projects not more than fifteen inches from such wall except that lighting reflectors may project from such wall a distance not exceeding eight feet.

(f) A *projecting sign* is a sign which is attached to a wall of a building and projects more than fifteen inches beyond such wall.

(g) A *marquee sign* shall be a sign which is mounted on or against the facia of a marquee.

(h) A *sign structure* consists of the supports, uprights, bracing and framework of the sign.

(i) *Structural trim* includes the molding, battens, cappings, nailing, strips, laticing and platforms which are attached to the sign structure.

(j) *Display surface* is the surface made available either by the structure or the sign facing for the mounting of letters and decorations.

(k) *Sign facing* is the opaque or transparent surface or surfaces of the sign, upon, against or through which the message of the sign is exhibited.

(l) *Letters and decorations* include the letters, illustrations, symbols, figures, insignia and other devices employed to express and illustrate the message of the sign.

61-2.2. All outdoor signs hereinafter erected or altered shall comply with the following general requirements:

(a) Signs shall be adequately supported to resist wind loads as required in section 68-4.5.

(b) All signs projecting over public property shall comply with the requirements of section 77-2.5.

(c) Electric signs and unmounted sign boards shall comply with the requirements of section 61-3.

(d) Nothing in this section shall be interpreted to prevent the application of restrictions pertaining to signs as provided in the Chicago Zoning Ordinance.

(e) The name of the owner shall appear on the top of all signs more than twenty-four square feet in area.

61-2.3. Ground signs or wall signs used exclusively for the sale or lease of property on which they are erected, having an area not exceeding twenty-four square feet may be constructed entirely of combustible materials; provided that such ground signs shall be located not less than ten feet from any building or public way.

61-2.4. Except as provided in section 61-2.3 for sale and rental signs, all outdoor signs shall comply with the following construction requirements:

(a) Sign structures.

Sign structures shall be of non-combustible materials with the following exceptions:

(1) The sign structure of ground signs not exceeding fifteen feet six inches in height may be of combustible materials.

(2) Heavy timber members may be used for bearing and anchoring of roof signs at the roof level.

(b) Structural Trim.

Structural trim of signs located within Fire District No. 1 shall be of non-combustible materials. Structural trim of signs located with Fire Districts Nos. 2 or 3, may be combustible materials.

(c) Sign Facings.

Facings shall be of non-combustible materials except that facings of approved combustible materials not exceeding a total of 100 square feet in area shall be permitted on each face of any sign.

(d) Letters and Decorations.

Letters and decorations of signs shall be made of non-combustible materials, except that:

Letters and decorations may be made from or faced with approved combustible materials, provided that the area occupied or covered by such letters and decorations is limited on the following basis:

<i>Area of Display Surface</i>	<i>Maximum Area Occupied or Covered by Combustible Materials</i>
Not more than 100 sq. ft.	100% of display surface area.
More than 100 sq. ft. but less than 2,100 sq. ft.	100 sq. ft. plus 25% of the difference between 100 sq. ft. and the area of the display surface.
More than 2,100 sq. ft.	600 sq. ft.

61-2.5. (a) Open Ground Signs.

The face of open ground signs as defined in section 61-2.1 (b) shall not exceed sixty feet in height.

(b) Ground signs.

(1) Ground signs other than open ground signs shall not exceed fifteen feet six inches in height measured from the adjoining street level or from the ground level if such ground level is above the street level. The distance to a public way from such ground signs shall be not less than the height of the sign above such public way.

(2) The bottom of the face of every ground sign shall be constructed at least three feet six inches above the ground or sidewalk level, whichever is the highest. The space below the face may be filled with a decorative lattice or similar light construction having not less than fifty per cent open area.

(c) Roof Signs.

(1) The height of a roof sign shall not exceed sixty feet above the roof on which it is erected nor twenty-five feet above the height limitations of the building as established in section 51-1.

(2) The bottom of the face of a roof sign shall have a clear space of not less than five feet between the sign and the roof on which it is erected, unobstructed except for necessary vertical supports and bracing.

(3) The face of a roof sign shall be located not less than six feet back from any wall fronting on a public way.

(d) Projecting Signs.

The height of a projecting sign shall not exceed seventy feet, and the area of one face of a projecting sign shall not exceed 250 square feet. Signs projecting over public property shall be in accordance with requirements of section 86.1-10.

[Amend. Coun. J. 5-28-58, p. 7799.]

61-2.6. Approved combustible materials as applied to outdoor signs shall include:

(1) Wood or materials not more combustible than wood.

(2) Combustible plastics which, when tested in accordance with ASTM Standard Method Test for Flammability of Plastics over 0.050 inch in thickness (D635-44) burn no faster than 2.5 inches per minute in .060 inch thickness.

61-3. Electric signs and signboards shall comply with the provisions of chapter 86.1.

61-4.

61-4.1. A coal pocket is defined as a separate structure used for the receiving, storage or disposing of coal.

61-4.2. Coal pockets and other similar structures shall be constructed entirely of non-combustible materials except that such structures not more than thirty-five feet in height may be constructed of heavy timber members when located not less than thirty feet from a lot line or other structure or from the opposite side of a public way or railroad right of way.

61-5. Fences shall comply with the provisions of sections 61-5.1 to 61-5.4, inclusive.

61-5.1. (a) A fence is hereby defined as a structure forming a barrier at grade between lots, between a lot and a street or any alley, or between portions of a lot or lots, such structures being independent of any other.

(b) Fences shall be classified according to the general form of their construction as screen fences or solid fences.

(c) A screen fence is a fence so constructed that at least fifty per cent of the superficial area thereof consists of regularly distributed apertures.

(d) A solid fence is a fence so constructed that less than fifty per cent of the superficial area thereof consists of regularly distributed apertures.

(e) Any fence not constructed entirely of non-combustible materials shall be classed as a combustible fence.

61-5.2. Maximum Height. (a) The height of a combustible screen fence shall not exceed eight feet.

(b) The height of a combustible solid fence shall not exceed six feet, except that such fence may have a height not exceeding eight feet under the following conditions:

(1) When the distance from the fence to a public way exceeds the height of the fence.

(2) When such fence is laterally braced on one side with structural braces extending to the top of the fence or is supported by posts of non-combustible material set in masonry or concrete foundations.

(c) The height of a non-combustible screen fence shall not exceed ten feet, except as follows:

(1) A non-combustible screen fence enclosing a place of open air assembly or a yard of an institutional, business, industrial or storage occupancy may have a height not exceeding fifteen feet.

(d) The height of a non-combustible solid fence shall not exceed eight feet except as follows:

(1) A non-combustible solid fence enclosing a place of open air assembly or a yard of an institutional, business, industrial or storage occupancy may have a height not exceeding twelve feet.

61-5.3. Fences shall be designed and constructed to resist a horizontal wind pressure of not less than thirty pounds per square foot in addition to all other forces to which they may be subjected.

61-5.4. The use of barbed wire at a height less than eight feet above the ground shall be prohibited; provided, however, that the use of barbed wire above six feet from the ground when wholly on or over private property shall be permitted. [Amend. Coun. J. 11-4-50, p. 6975.]

61-6. Every fire station hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-6.1 to 61-6.3, inclusive.

61-6.1. A fire station is defined as a building or part of a building designed or used as a place for the housing of one or more pieces of fire fighting or salvaging equipment, together with sleeping quarters, locker rooms, toilet rooms, heating plant and such other rooms or spaces as required by the fireman or the equipment.

61-6.2. (a) Fire stations shall be of a type of construction not less fire resistive than Type III-B.

(b) Sleeping quarters and rooms and spaces appurtenant thereto shall comply with all requirements for Multiple Dwellings. [Amend. Coun. J. 5-27-55, p. 300.]

61-6.3. A fire station may occupy a part of a building used for business, mercantile, storage, industrial or police station occupancy, provided that such fire station shall be separated from every other part of such building by construction providing fire resistance of not less than two hours.

61-7. Every police station hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-7.1 to 61-7.3, inclusive.

61-7.1. A police station is defined as a building or part of a building used by the police department for administrative offices and detention facilities and may include sleeping quarters, courtrooms and such other rooms or spaces as may be required.

61-7.2. (a) Police stations shall be of a type of construction not less fire resistive than Type III-B.

(b) The portion of a police station used for the detention of prisoners shall comply with all applicable requirements for jails.

(c) Administrative offices shall comply with requirements for Business Units.

(d) Courtrooms shall comply with requirements for Assembly Units.

(e) Sleeping quarters and rooms and spaces appurtenant thereto shall comply with the requirements for Multiple Dwellings.

61-7.3. A police station may occupy a part of a building used for business, mercantile, storage, industrial or fire station occupancy, provided that such police station shall be separated from every other part of such building by construction providing fire resistance of not less than two hours.

61-8. Every private garage hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-8.1 to 61-8.4, inclusive.

61-8.1. A private garage is defined as a building, or part of a building, not more than one story high and having an area not exceeding 800 square feet and designed or used for the storage of passenger motor vehicles containing flammable fuel. [Amend. Coun. J. 3-14-57, p. 4430.]

61-8.2. A private garage may be of any type of construction permitted in the fire district in which it is located, except that private garages of Type IV-A or IV-B construction not exceeding 500 square feet in area may be erected in any fire district. Floor construction of all private garages shall be of non-combustible materials providing fire resistance of not less than two hours. Doors shall be limited to eight feet in height. [Amend. Coun. J. 3-14-57, p. 4430.]

61-8.3. (a) A private garage of Types IV-A or IV-B construction shall be located not less than three feet from an interior lot line.

61-8.4. (a) Private garages located within, or attached to, another building or located less than six feet from another building on the same lot shall be separated from such building by construction providing fire resistance of not less than one hour.

(b) There shall be no opening through such construction except that there may be one access doorway not exceeding twenty-one square feet in area.

(c) Such opening shall be protected with a self-closing door not less fire-resistive than a solid wood door one and three-quarters inches thick.

(d) The sill of any door leading from a private garage to a building shall be located not less than eight inches above the garage floor.

61-9. Every roundhouse hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-9.1 to 61-9.3, inclusive.

61-9.1. A roundhouse is defined as a structure for the storing and repairing of locomotives using any fuel other than a volatile flammable liquid.

61-9.2. (a) Roundhouses shall be limited to one story in height and shall be of Types I-A, I-B, I-C, II or III-A construction.

(b) Floors and pits shall be constructed of non-combustible materials.

(c) Roofing shall be of Class A or B materials.

(d) Spaces used for storage of fuel or combustible materials shall be separated from the roundhouse by construction providing fire resistance of not less than four hours.

[Amend. Coun. J. 1-20-50, p. 5758.]

61-9.3. Except as otherwise provided in this section roundhouses shall comply with all applicable requirements for Class H-2, Moderate Hazard Storage Units.

61-10. Every carbarn hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-10.1 to 61-10.3, inclusive.

61-10.1. A carbarn is defined as a structure for the storing and repairing of electric street cars and other electrical conveyances.

61-10.2. (a) Carbarns shall be of Types I-A, I-B, I-C, II or III-A construction.

(b) Floors and pits shall be constructed of non-combustible materials.

(c) Roofing shall be of Class A or B materials.

[Amend. Coun. J. 1-20-50, p. 5758.]

61-10.3. Except as otherwise provided in this section, carbarns shall comply with all applicable requirements for Class H-2, Moderate Hazard Storage Units.

61-11. Every shed and shelter shed hereafter erected shall comply with all applicable requirements of this code pertaining to Class H-2, Moderate Hazard Storage Units, and with the special provisions of sections 61-11.1 and 61-11.2.

61-11.1. (a) A shelter shed is defined as a roofed structure, used for storage purposes only, not exceeding fifteen feet in height and having more than fifty per cent of the area of its sides open.

(b) A shed is defined as a structure, used for storage purposes only, not exceeding fifteen feet in height nor 400 square feet in ground area.

61-11.2. (a) Sheds of combustible frame construction shall be permitted in Fire Districts No. 1 and No. 2 under the following conditions:

(1) Sheds shall be located not less than ten feet from any other building.

(2) No more than one shed shall be permitted on any one lot.

(b) Shelter sheds shall be permitted in Fire Districts No. 1 and No. 2 under the following conditions:

(1) Floors shall be of non-combustible material or of wood planks not less than two inches in nominal thickness laid directly on the ground.

(2) Shelter sheds not exceeding 800 square feet in area shall be located not less than ten feet from a lot line or from any other building.

(3) Shelter sheds exceeding 800 square feet, but not exceeding 1,600 square feet in area, shall be located not less than twenty-five feet from a lot line or from any other building and shall have enclosing walls, if any, of non-combustible materials.

61-11.3. Sheds and shelter sheds shall comply with all applicable requirements for Class H-2, Moderate Hazard Storage Units.

61-12. (a) Construction.

Water tanks shall be designed and constructed in accordance with the structural requirements of this code.

(b) Supporting Structure.

Tanks of more than 500 gallon capacity shall be supported on masonry, reinforced concrete, steel or other approved non-combustible construction. When such supporting construction is within a building, it shall be protected to comply with the requirements of Type I-A construction.

61-13. Every cooling tower hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-13.2 and 61-13.3.

61-13.1. A cooling tower is defined as a structure designed or used for the cooling by exposure to the open air of liquids used in the operation of a refrigeration or air conditioning installation.

61-13.2. Cooling tower, except drip boards, shall be constructed entirely of non-combustible materials under the following conditions:

(a) All cooling towers exceeding fifty feet in height.

(b) Cooling towers exceeding 250 square feet in area or fifteen feet in height when located on buildings within Fire District No. 1.

61-13.3. Cooling towers shall not exceed forty per cent of the roof area of the building on which they are erected.

61-14. Every tent hereafter erected shall comply with the special provisions of sections 61-14.1 and 61-14.2.

61-14.1. A tent is defined as a portable structure with walls of canvas or other like material, covered with similar materials, and supported by poles, stakes and roofs.

61-14.2. Tents exceeding 120 square feet in area shall be permitted only for use as a meeting place for gatherings for religious services not exceeding 500 persons and shall comply with the following requirements:

(a) Application for permit shall be accompanied by:

(1) A certificate executed by an approved recognized testing laboratory filed with the commissioner of buildings certifying that such tent is flame-proofed as evidenced by tests made by such laboratory within thirty days preceding the date of intended use.

(2) A plan showing the construction of the tent and the location and width of aisles and exits, the number of rows and the maximum seating capacity in each section.

(b) Exit facilities shall comply with all applicable requirements for Assembly Units.

(c) Standard fire extinguishers, as provided in chapter 90, shall be conspicuously located at each exit.

(d) Tents shall be located not less than fifty feet from any other building or structure.

(e) Permits for tents shall be limited to a period of sixty days.

61-15. Every gasoline filling station hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-15.1 to 61-15.5, inclusive.

61-15.1. A gasoline filling station is defined as a structure, building or premise, or a portion thereof, where volatile flammable oil for retail supply to motor vehicles is stored or sold.

61-15.2. The installation of pumps and tanks shall comply with the requirements of chapter 60.

61-15.3. Buildings and structures shall comply with the height and area limitations and other applicable requirements applying to Mercantile Units, except as follows:

(a) Gasoline filling station buildings shall have exterior walls of construction providing fire resistance of not less than one hour except that when such walls are at least twelve feet from adjacent lot lines or other structures, they may be of unprotected non-combustible construction.

(b) Canopies, including supports thereof, extending over driveways or fuel pumps shall be of construction providing fire resistance of not less than one hour or shall be of non-combustible materials.

(c) Buildings or structures used for the housing, servicing or repair of motor vehicles shall comply with all applicable requirements applying to garages.

(d) Basements shall not be permitted in filling stations.

[Amend. Coun. J. 11-7-58, p. 8380.]

61-15.4. (a) When the exterior wall of a filling station is less than five feet from a property line or adjacent structure, no opening shall be placed in such wall.

(b) All openings in walls located less than twelve feet from an interior lot line or from any adjacent structure shall be protected with fire windows or fire doors complying with the requirements of chapter 65.

61-15.5. Unless driveways are graded to prevent gasoline spills or overflows from flowing into or under buildings, door sills shall be raised above the outside ground level.

61-16. Every greenhouse hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-16.1 to 61-16.3, inclusive.

61-16.1. A greenhouse on the same lot with a building of another occupancy and not exceeding 400 square feet in area nor fifteen feet in height shall be considered an accessory structure. Such structures of combustible frame construction may be located in any fire district.

61-16.2. Greenhouses, except accessory structures, shall comply with the height and area limitations and other applicable requirements applying to Mercantile Units.

61-16.3. Skylights in greenhouses shall comply with the requirements of section 62-11.1 with the following exceptions.

(a) Wire glass shall not be required.

(b) Skylights of greenhouses not exceeding one story or twenty feet in height, nor 3,000 square feet in area, may be constructed of combustible materials.

61-17. Platforms, erected for temporary use in any assembly or open air assembly unit under the provisions of section 43-13.1, shall comply with the following requirements:

(a) Height and Area.

(1) The height of a temporary platform shall not exceed six feet above the floor or ground level.

(2) No temporary platform shall exceed 1,500 square feet in area.

(b) Construction.

(1) Platforms may be constructed of materials not more combustible than wood.

(2) Platforms shall be designed to support a uniform live load of not less than 100 lbs. per square foot and shall be securely braced for lateral stiffness.

Private Residential Swimming Pools

61-18. Every existing private residential swimming pool and every such pool constructed, installed and maintained hereafter shall comply with all applicable provisions of this code and with the special provisions of sections 61-18.1 to 61-18.20, inclusive. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.1. The term "private residential swimming pool" is hereby defined as a receptacle for water, or an artificial pool of water having a depth at any point of more than two feet, intended for the purpose of immersion or partial immersion therein of human beings, and including all appurtenant equipment, constructed, installed, and maintained in or above the ground outside of a building used for a single family dwelling unit. Provided further, that such private residential swimming pool is maintained by an individual primarily for the sole use of his household and guests and not for the purpose of profit or in connection with any business operated for profit. No out-of-doors swimming pool intended for the use

of members and their guests of a non-profit club or organization, or limited to house residents of a multiple dwelling unit, a block, subdivision, neighborhood, community or other specified area of residence shall be permitted in a single family residence, duplex residence, or apartment district. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.2. (a) Private residential swimming pools shall be permitted in single family residence districts only.

(b) No portion of a private residential swimming pool shall be located at a distance less than ten feet from any side or rear property line, or building line. Pumps, filters and pool water disinfection equipment installations shall be located at a distance not less than ten feet from any side property line [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.3. It shall be unlawful to proceed with the construction, installation, enlargement or alteration of any private residential swimming pool and appurtenances within the city unless permits therefor shall have first been obtained from the commissioner of buildings and the commissioner of the department of water and sewers. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.4. (a) All drawings and plans for the construction, installation, enlargement or alteration of any private residential swimming pool and appurtenances for which a permit is required shall first be presented to the commissioner of buildings for examination and approval as to proper location, construction, and use, and thereafter shall be presented to the board of health and the commissioner of the department of water and sewers for submission to the proper officials of those departments for examination and approval with regard to such provisions of this code as are within the duty of such office to enforce. After said drawings and plans have been examined and passed upon, the same shall be returned to the commission of buildings where they shall be taken up for examination and approval by the commissioner of buildings.

(b) All plans and drawings shall be drawn to a scale of not less than one-eighth of an inch to the foot, on paper or cloth, in ink, or by some process that will not fade or obliterate. All distances and dimensions shall be accurately figured and drawings made explicit and complete, showing the lot lines, and including information pertaining to the pool, walk and fence construction, water supply system, drainage and water disposal systems, and all appurtenances pertaining to the swimming pool. Detail plans and vertical elevations shall also be provided in accordance with section 82-4 of this code.

(c) No person shall construct, enlarge, alter or use any private residential swimming pool and appurtenances until plans have been examined and approved by the board of health, the department of water and sewers, and the department of buildings, and the necessary permits are issued by the department of water and sewers and the department of buildings.

(d) All private residential swimming pools, appurtenances, water supply and drainage systems shall be constructed in conformity with the approved plans. If any deviations from such plans are desired, a supplementary plan covering that portion of the work involved shall be filed for approval and shall conform to the provisions of this code. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.5. All private residential swimming pools shall be of the recirculation type in which circulation of the water is maintained through the pool by pumps; the water drawn from the pool being clarified and disinfected before being returned to the pool. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.6. Private residential swimming pools walls and floor shall be constructed of any impervious material which will provide a tight tank with white or light colored finished easily cleaned surfaces. The side and end walls shall be vertical and shall present a smooth finish. The floor or bottom surface of the pool shall have a non-slip finish as smooth as possible. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.7. The structural design and construction of residential swimming pools shall comply with the requirements of chapters 68 to 76, inclusive, of this code. (Pools shall be designed to withstand the water pressure from within and to resist the pressure of the earth when the pool is empty). The slope of the bottom of any part of a pool in which the water is less than five feet in depth shall not be more than one foot in each fifteen feet. The maximum slope where water is five feet or more in depth shall not exceed one foot in three feet. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.8. Unobstructed walk areas not less than six feet wide shall be provided to extend entirely around the pool. The walk area shall be constructed of impervious material, and the surfaces shall be such as to be smooth and easily cleaned and of non-slip construction. The slope of the walks shall have a pitch of at least one-fourth inch to the foot, designed so as to prevent back drainage from entering the pool. Walk drains shall be provided for each one hundred square feet of walk area. Drain pipe lines shall be at least three inches in diameter; drain openings shall have an open air of at least four times the cross sectional area of the drain pipe. The walk drain system shall have indirect connection to the sewer in accordance with sections 82-62 and 82-94 of this code. The walk drains shall not be connected to the recirculation system piping. The drainage system shall be constructed in conformance with chapter 82 (Plumbing Provisions) of this code. Reference is also made to section 61-18.15c. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.9. All private residential swimming pools shall be completely enclosed by a fence erected along the periphery of the pool walks. All fence openings or points of entry into pool area enclosure shall be equipped with gates. The fence and gates shall be five feet in height above the walk grade level and shall be constructed of a minimum number 9 gauge woven wire mesh corrosion-resistant material. All gates shall be equipped with self-closing and self-latching devices placed at the top of the gate and made inaccessible to small children. All fence posts shall be decay or corrosion-resistant and shall be set in concrete bases. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.10. Two or more means of egress in the form of steps, ladders or step holes shall be provided for all private residential swimming pools. At least one such means of egress shall be located on a side of the pool at both the deep end and shallow end of the pool. Treads of steps, ladders, or step holes shall be constructed of non-slip material and at least three inches wide for their full length. Steps, ladders or step holes shall have a handrail on both sides. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.11. Private residential swimming pools shall be provided with overflow gutters on all vertical walls and shall extend around the entire perimeter of the pool. The overflow gutter shall be of the open, roll-over, or semi-recessed type, having a smooth finish. The lip or overflow gutter edge shall be level, the overflow gutter shall have a minimum depth of four inches; the overflow gutter bottom shall have a slope toward each drain and have a pitch of not less than one-quarter of an inch to the foot; drain spacings shall be a minimum of fifteen feet on centers; drain pipelines shall be at least three inches in diameter; outlet fixtures shall have a grate opening area of at least twice the cross sectional area of the drain pipe; the drain lines shall have an indirect connection to the sewer in accordance with sections 82-62 and 82-94 of this code. The drainage system shall be constructed in conformance with the provisions of chapter 82 of this code. Reference is also made to section 61-81.15c. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.12. No source of water other than that secured from the city of Chicago water works distribution system shall be used in private residential swimming pools. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.13. (a) Private residential swimming pool water recirculation system inlet shall be located so as to produce so far as possible uniform circulation of water throughout the pool without the existence of dead spots and to carry pool

bottom deposits to the outlets. Recirculation systems inlets in the pool walls shall be spaced not more than twenty feet on centers entirely around the perimeter of the pool and shall discharge at a minimum depth of ten inches below the pool overflow level.

(b) Pools shall be equipped with suitable facilities for adding make-up water as needed. There shall be no physical connection between the water supply line and the pool system. If the make-up water is added directly to the pool, the outlet shall be at least six inches above the upper rim of the pool. If the make-up water line discharges to a surge or balancing tank, the point of discharge shall be at least six inches above the rim of the tank. If a hose connection from a sill cock or other plumbing fixture is to be used for supplying make-up water, then an approved vacuum breaker shall be installed between the sill cock or control valve at the fixture and the hose connection. The vacuum breaker shall be installed at a height not less than seven feet six inches above the floor, platform or ground upon which a person would stand when operating the sill cock or control valve.

(c) The systems supplying recirculated water and make-up water to the pool shall be constructed in conformance with chapter 83 (Water Supply and Distribution Systems) of this code. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.14. (a) Private residential swimming pool water recirculation system outlets should be so located as to provide at least one outlet at the deepest point in the pool if the pool width does not exceed twenty feet. If the pool width is more than twenty feet, multiple outlets shall be provided and spaced not more than twenty feet apart, nor more than ten feet from walls. All pool drain outlets shall be equipped with gratings having an area of openings not less than ten times the cross-sectional area of the outlet pipe. The gratings shall be of such design so as they can not be readily removable by bathers and will not injure bathers' fingers.

(b) Pools shall be equipped with facilities for completely emptying the pool and the discharge of the pool water to the sewer shall be at a rate not exceeding 250 gallons per minute. No direct connection shall be made to the sewer. The drainage system shall be constructed in conformance with the provisions of chapter 82 of this code. The drain pipe line diameter shall be at least six inches.

(c) Drain pipe lines from walk areas, scum gutters and pools shall discharge into a common catch basin. If elevation permits, the catch basin may drain by gravity into the sewer. If, however, the elevations are such as to require pumping, the combined discharge shall be pumped into the sewer. In either case, a back-water valve or gate shall be installed downstream from the catch basin and the pump. Water drained from the pool shall not be discharged to the sewer system during periods of rain or storms. At no time shall the rate of drain water discharge exceed a flow of 250 gallons per minute. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.15. (a) Private residential swimming pools recirculation systems shall consist of pumping equipment, hair and lint catchers, filters, together with the necessary pipe connections to the pool inlets and outlets, facilities and pipe connections necessary for backwashing filters, and facilities and equipment for disinfecting the pool water.

(b) The entire recirculating system shall be capable of producing a six hour turnover of the entire water volume contents.

(c) The recirculation system pump shall have sufficient capacity to discharge the volume of water required for a six hour turnover of the pool against the maximum head in the recirculating system.

(d) The pump used for backwashing filters shall have sufficient capacity to provide a filter backwash rate of at least 15 gallons per minute per square foot of filter area.

(e) A hair and lint catcher or strainer shall be installed on the suction side of the circulation pump to prevent hair, lint and other extraneous matter

from reaching the pump and filters. Hair and lint catcher shall be so designed that they can be easily dismantled for cleaning and inspection and shall be so located as to be easily accessible for cleaning. The design features shall be as follows: Water passes through the strainer from the outside; the strainer is made of non-corrosive material; the width or diameter of strainer openings is not more than one-eighth inch; the area of the strainer openings shall be at least five times the cross sectional area of the inlet pipe to the strainer.

(f) Recirculating systems shall contain rapid pressure filters. Sufficient filter area shall be provided to filter the entire contents of the pool in six hours at the rate of not more than three gallons per square foot of filter area per minute. The filter backwashing facilities shall be sufficient to backwash at the rate of 15 gallons per minute per square foot of filter area. All backwash water and effluents shall be discharged to the sewer through an indirect connection. Pressure filters shall be equipped with readily accessible air relief valves, loss of head or pressure gauges on the inlet and outlet pipes, and an access head or hole large enough to permit inspection, maintenance and repair work. Sight glasses that can be easily removed for cleaning shall be provided in the effluent line from the filter units.

(g) Equipment shall be provided for the disinfection of all pool water. Any disinfection method using materials other than chlorine compounds shall be subject to the approval of the board of health. Disinfection equipment installed for the use of chlorine compounds shall have sufficient capacity to maintain a minimum free chlorine residual of 0.5 parts per million. The disinfectant shall be introduced into the recirculation system ahead of the filters.

(h) Gaseous chlorination systems shall not be made use of as a disinfection method for pool water.

[Passed. Coun. J. 3-14-57, p. 4427.]

61-18.16. (a) All electrical installations provided for, installed and used in conjunction with private residential swimming pools, shall be in conformance with chapters 86, 87 and 88 of this code.

(b) No current carrying electrical conductors shall cross private residential swimming pools, either overhead or underground or within fifteen feet of such pools.

(c) All metal fences, enclosures or railings near or adjacent to private residential swimming pools, which might become electrically alive as a result of contact with broken overhead conductors, or from any other cause, shall be effectively grounded.

[Passed. Coun. J. 3-14-57, p. 4427.]

61-18.17. (a) A skilled swimmer shall be present at all times that private residential swimming pools are in use.

(b) Every private residential swimming pool shall be equipped with one or more throwing ring bouys not more than fifteen inches in diameter and having sixty feet of 3/16 inch Manila line attached, and one or more light but strong poles with blunted ends and not less than twelve feet in length, for making reach assists or rescues.

(c) No diving board or platform more than three feet above water level shall be installed for use in connection with any private residential swimming pool.

(d) Life-saving equipment approved by the board of health shall be provided and maintained so as to be immediately available for use in an emergency.

[Passed. Coun. J. 3-14-57, p. 4427.]

61-18.18. (a) Private residential swimming pools may be used between June 1 and September 15, inclusive, only. No private residential swimming pool shall be made use of between the hours of 10 p.m. and 9 a.m. during this period.

(b) During the period September 16 to May 30, inclusive, all private residential swimming pools shall be completely drained of all water.

(c) A suitable substantial protective cover shall be provided and installed over all private residential swimming pool surfaces during the period September 16 to May 30, inclusive.

(d) All private residential swimming pools shall be maintained in a clean and sanitary condition, and all equipment shall be maintained in a satisfactory operating condition during periods the pool is in use.

(e) No private residential swimming pool shall be used, kept, maintained or operated in the city, if such use, keeping, maintaining or operating shall be the occasion of any nuisance or shall be dangerous to life or detrimental to health. [Passed. Coun. J. 3-14-57, p. 4427.]

61-18.19. The board of health periodically shall inspect all private residential swimming pools to determine whether or not the provisions of this code regarding health, sanitation and safety applicable thereto are being complied with. [Passed. Coun. J. 3-14-57, p. 4427.]

Exposed Metal Structures

61-19. Exposed metal structures shall conform to the provisions of sections 61-19.1 to 61-19.5 inclusive. [Passed. Coun. J. 3-14-57, p. 4430.]

61-19.1. It shall be the duty of the owner, agent or person in charge, possession or control of any building upon which or above which any exposed metal structure, including tank and sign structures, canopies, marquees, fire escapes, flag poles, metal cornices, and smoke stacks are now located or which may be erected, to maintain such structures in a good and safe condition. Any exposed tank of larger than two hundred fifty gallons shall have a rust-proof plate or tag attached to such tank or its supports, which tag shall show in letters or figures at least two inches high, the year and month in which the tank and its supports were installed. [Passed. Coun. J. 3-14-57, p. 4430.]

61-19.2. Within two years after the erection or installation of any such exposed metal structure and its supports, permitted by this code upon or above the roof of any building, and within two years following of the passage of this ordinance, and at least once every five years thereafter, every such exposed metal structure now existing or hereafter erected shall be subjected to a critical examination by a licensed architect or a registered structural engineer, employed by such owner or agent or person in charge, possession or control of any such building. Said licensed architect or registered structural engineer shall render a report in writing showing the structural condition of the structure and its supports. Two copies of the report shall in turn be submitted to the commissioner of buildings. One copy of said report shall, if satisfactory to the commissioner of buildings, be returned to the owner, agent or person in charge, possession or control of said building, bearing a stamp of approval, signed by said commissioner of buildings. [Passed. Coun. J. 3-14-57, p. 4430.]

61-19.3. Every wood or metal structure now existing or hereafter erected, placed on the ground, supporting tanks, signs, etc., which structure extends twenty-five feet above the level of the surrounding ground surface shall, within one year after the passage of this ordinance, and at least once every five years thereafter, be subject to the same requirements provided by this chapter for metal structures on or above roofs. [Passed. Coun. J. 3-14-57, p. 4430.]

61-19.4. Every such structure found to be in an unsafe condition or in need of repairs or reinforcement or precautionary measures, shall be subject to notice by the commissioner of buildings to the owner, agent, or person in charge, control or possession of the building or premises where such structure is located, immediately to effect such repairs, reinforcements or precautionary measures, as will bring the structure in a good and safe condition and further without delay, to begin and complete the work of permanent repairs, reinforcement or removal

which may be required to make the premises conform to the building provisions of this code. [Passed. Coun. J. 3-14-57, p. 4430.]

61-19.5. For the purposes of this chapter, no form of paint, galvanizing, or similar coating shall be considered as a protection, exempting otherwise unprotected metal structures from the provisions thereof. [Passed. Coun. J. 3-14-57, p. 4430.]

Parking Facilities

61-20. Every parking facility hereafter erected shall comply with all applicable provisions of this code and with the special provisions of sections 61-20.1 to 61-20.15, inclusive. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.1. "Parking facility" means a multi-level structure in which each level is used primarily for the purpose of storing passenger motor vehicles, and which does not necessarily have enclosing walls.

"Hoist type" means a parking structure in which mechanical lift equipment provides a combination vertical and horizontal operation for semi-automatic parking of vehicles in a multi-level structure.

"Ramp type" means a parking structure provided with inclined driveway for transporting vehicles to various parking levels.

"Cat walk" means a footway above ground floor.

"Parking level" means a floor in a structure on which vehicles are parked.

"Dry standpipe" means a pipe extending full height of a building to which fire hose can be attached and which, when not in operation, is free from water to prevent freezing.

"Manlift" means a continuous belt-driven lifting device used for transmitting attendants between various levels. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.2 Structures shall be of Type 1-A fire resistive construction, as defined in chapter 49. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.3. There shall be no storage of flammable liquids within the structures, except as may be required for heating of the structures. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.4. A standard automatic sprinkler system shall not be required in these facilities except where the vehicle storage area on more than four levels is enclosed on all sides. A standard inside standpipe system, as required by the provisions of this code shall not be required in these unheated automobile parking facilities; provided, however, that a dry standpipe system, as approved by the division marshal in charge of the bureau of fire prevention, shall be required in such facilities which are in excess of eighty feet in height. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.5. Ventilation, as defined in chapter 81 shall be required only when the openings in the exterior walls on a level are less than twenty per cent of the total external wall area on such level. The location of such openings shall be well distributed. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.6. Emergency lighting shall comply with System III as defined in chapter 88. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.7. Access from one side of the hoistway to the other side, in each level, shall be provided by a catwalk at each end of the structure. Hoistways shall be protected with incombustible gates and guards. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.8. Two stairways, not less than thirty inches wide from lowest to uppermost level shall be required for each parking structure. These stairways may be of open riser and open grille tread type. There shall be a one hour fire resistive wall enclosure separating stairways from parking levels. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.9. Ramps, hoistways and elevator shafts used solely for the movement of passenger vehicles from one level to another need not be enclosed. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.10. Adequate approved curbs, not less than twelve inches in height or wheel guards of incombustible construction shall be provided. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.11. On every floor where cars are driven, an approved railing or similar device, of incombustible construction shall be provided at every exterior opening where the exterior wall is omitted and at each interior opening in the floor. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.12. Protection of openings in exterior walls shall comply with section 62-2.4. [Passed Coun. J. 5-28-58, p. 7797.]

61-20.13. The minimum ceiling height in a parking level shall be not less than seven feet, this to be the minimum clearance measured from the floor to beams, pipes, lighting fixtures or other similar obstructions. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.14. Manlifts shall be designed in accordance with the provisions of the American Standard Safety Code for Manlifts, Publication ASA A90.1-1949, by the American Society of Mechanical Engineers; where slide poles are installed, an interchange shall be required at each parking level, and shall be shielded by wire mesh or railing barriers. [Passed. Coun. J. 5-28-58, p. 7797.]

61-20.15. The commissioner of buildings and the division fire marshal of the bureau of fire prevention are authorized and directed to approve plans and to issue permits for the construction of parking facilities described herein when, in their judgment, plans and specifications of said parking facilities conform with the provisions of this ordinance. [Passed. Coun. J. 5-28-58, p. 7797.]

CHAPTER 62

FIRE-RESISTIVE REQUIREMENTS

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62-1. Fire walls, when required, shall comply with the requirements of sections 62-1.1 to 62-1.5, inclusive.

62-1.1. A fire wall is hereby defined as a wall which subdivides a building into limited fire areas or which separates two or more buildings to restrict the spread of fire and which extends continuously through all stories to a level above the roof.

62-1.2. All fire walls shall be constructed on non-combustible materials providing fire resistance not less than the following:

(a) Walls exceeding fourteen feet in unsupported height—8 hours.

(b) Walls not exceeding fourteen feet in unsupported height—4 hours.

All structural members supporting fire walls shall be of construction providing fire resistance not less than that required for the wall.

62-1.3. If fire walls are offset at intermediate floor levels, the offset floor and its supporting construction shall provide fire resistance not less than that required for the wall.

62-1.4. Fire walls shall extend not less than thirty-two inches above the roof, except that the fire walls may extend to the roof level when the roof is of non-combustible construction for a distance of not less than forty feet on each side of the wall.

62-1.5. (a) Except as provided in subparagraph (b), the aggregate width of openings through a fire wall shall not exceed 25% of the length of the wall, except that at least one opening not exceeding the maximum dimensions for fire doors established in section 65-5.5 shall be permitted in a fire wall of any length.

(b) In buildings of Types I-A, I-B and I-C construction, equipped throughout with an approved system of automatic sprinklers, the aggregate width of all openings at any floor level shall not exceed fifty per cent of the length of the wall.

(c) Openings in fire walls shall be protected on both sides of the wall with Class A fire doors or other approved protective assemblies complying with the requirements of section 65-5. One door shall be automatic and the other door shall be either automatic or self-closing.
[Amend. Coun. J. 3-14-57, p. 4431.]

62-2. Exterior walls shall comply with all structural requirements and with the special requirements of sections 61-2.1 to 62-2.4, inclusive.

62-2.1. Exterior walls, except in Types IV-A and IV-B construction, shall be constructed of non-combustible materials providing fire resistance as required in chapter 49.

62-2.2. Any exterior enclosing surface of a building, the plane of which forms an angle of seventy-five degrees or more with the horizontal, shall be subject to the requirements of exterior walls.

62-2.3. When the exterior wall of a building of Types III-A, III-B or III-C faces an interior lot line at a distance of less than twelve feet, such wall shall have a parapet wall extending not less than thirty-two inches above the roof with the following exceptions:

(a) At the gable ends of roofs having a slope of more than fifteen degrees from the horizontal, the height of a required parapet shall not be less than one foot.

(b) Parapets shall not be required:

(1) In Single-Family and Two-Family Dwellings not more than two stories and attic in height located not less than three feet from a lot line.

(2) In all buildings when the roof is of non-combustible construction for a distance of not less than forty feet from the wall.

(3) In all buildings when the roof has a slope of more than fifteen degrees from the horizontal in a direction perpendicular to the wall.

62-2.4. Openings shall be deemed to face an interior lot line or the wall of another building when the plane of the opening forms an angle of less than 60° with the plane of such lot line or wall.

(a) Protection of opening in exterior walls, except as required for protection of vertical exits in chapter 67, shall not be required in the following buildings:

(1) Church auditoriums.

(2) Residential Units not more than three stories in height.

(3) Buildings of any occupancy of Types IV-A or IV-B construction.

(b) In all other buildings, the following openings in exterior walls shall be protected with Class D or Class E fire doors, fire windows or other approved opening protective assemblies complying with the requirements of chapter 65.

(1) Openings facing an interior lot line or the opposite side of a public way at a distance of less than twelve feet.

(2) Openings facing an opening in the exterior wall of another building at a distance of less than twelve feet.

(3) Openings facing the wall of a building of Type IV-B construction at a distance of less than twelve feet.

(4) Openings less than fifty feet above and less than twelve feet horizontally from the roof of another building.

(5) Openings adjacent to smokeproof towers, horizontal exits, exterior stairways or fire escapes shall be protected as required in sections 67-11.3, 67-13.3, 67-15.2, and 67-16.2.

62-3. Stairs, shafts and openings in floors and roofs shall be enclosed as required in sections 62-3.1 to 62-3.6, inclusive, to prevent spread of fire from floor to floor and to protect exit areas.

62-3.1. (a) Enclosure partitions supporting loads shall comply with the provisions of chapter 49 for bearing partitions and with the provisions of this section.

(b) The bottoms of enclosures and the tops of enclosures not extending to the roof shall be of construction providing fire resistance not less than that required for the enclosure walls.

(c) Structural members supporting enclosure walls or partitions shall be of construction providing fire protection not less than required for the enclosure.

62-3.2. (a) Except as provided in paragraphs (b) and (c) of this section, all interior stairways shall be enclosed with walls and partitions providing fire resistance as follows:

In buildings exceeding three stories in height—2 hours.

In buildings not exceeding three stories in height—1 hour.

(b) Stairway enclosures shall not be required in buildings of Types I-A, I-B, and I-C construction for the following stairs:

(1) Stairs from the second floor to the main exit floor and serving the second floor only, except in Hazardous Use Units, in Multiple Dwellings and in Institutional Units where habitable rooms are located on the second floor.

(2) Stairs above the main exit floor level in Type I Schools not exceeding three stories in height.

(3) Stairs in Mercantile Units from a basement sales space to the main exit floor level, constituting not more than fifty per cent of the total required width of exit stairs.

(c) Stairway enclosures shall not be required in buildings of any type of construction for the following stairs:

(1) In Residential Units, stairs serving one dwelling unit only and entirely contained within such dwelling unit.

(2) In Assembly Units, stairs connecting any balcony level with the main floor level.

(3) In all occupancies, stairs connecting a mezzanine floor to the floor immediately below.

62-3.3. (a) Elevator Enclosures.

(1) Elevator shafts shall be enclosed with walls or partitions providing fire resistance of not less than two hours, except that walls and partitions separating adjacent shafts shall provide fire resistance of not less than one hour.

(2) Not more than three elevators shall be placed in one shaft enclosure.

(b) Escalator Enclosures. Escalators shall be enclosed with walls and partitions complying with the requirements for stairway enclosures as required in section 62-3.2 with the following exception:

(1) Escalators not required as a means of exit shall not be required to be enclosed providing effective means are provided which will prevent the spread of fire or gases from one floor to another in the event of fire.

62-3.4. Pipe shafts and ducts passing from one floor to another shall be enclosed with construction providing fire resistance of not less than one hour except that pipes and ducts requiring openings through floors not exceeding nine square feet in area shall not require enclosure, provided that openings between such pipes or ducts and the floor construction shall be filled with non-combustible materials securely held in place to prevent the passage of fire.

62-3.5. Wells and similar openings through a floor shall be enclosed with construction providing fire resistance of not less than one hour, except that enclosure of wells shall not be required where open stairways are permitted.

62-3.6. Openings in all required stairway and shaft enclosures shall be limited to those essential to the purpose of the shaft and shall be protected with self-closing Class B fire doors or other approved protective assemblies complying with the requirements of section 65-5 with the following exceptions:

(a) In Residential Units not exceeding three stories in height, openings in the enclosures of stairways serving not more than four dwelling units in any floor may be protected with doors not less fire resistant than solid wood doors one and three-fourths inches thick and shall be equipped with self-closing devices.

(b) Door openings in elevator and dumbwaiter shafts shall be protected by opening protective assemblies having a fire resistive rating of one hour conforming to the test requirements of sections 65-5.1 to 65-5.3 inclusive, and sections 65-5.5 to 65-5.8 inclusive. Such doors shall not be required to be self-closing and no heat-actuated closing device shall be installed on any landing opening in an elevator or dumbwaiter hatchway. [Amend. Coun. J. 1-20-50, p. 5758; 7-16-52, p. 2819; 11-7-58, p. 8380.]

62-4. Boiler rooms and heating plants located within a building of any occupancy shall be enclosed as provided in sections 62-4.1 to 62-4.4, inclusive, and when located in separate structures, shall comply with the requirements of section 58-2.

62-4.1. Enclosure of heating plants other than high pressure boilers shall not be required in the following buildings:

(a) Single-Family Dwellings.

(b) Multiple Dwellings when the heating plant serves not more than two dwelling units.

(c) Low-Hazard Industrial units.

(d) One-story Business, Mercantile, Industrial or Storage Units having a floor area not exceeding 3,000 sq. ft. [Amend. Coun. J. 1-20-50, p. 5758.]

(e) Except in hazardous use units listed in chapter 60, enclosures shall not be required for gas or oil fired unit heaters complying with section 59-3.5(c). [Amend. Coun. J. 3-14-57, p. 4431.]

62-4.2. Rooms containing heating plants or steam boilers shall be enclosed with walls, partitions, floors and ceilings of non-combustible construction providing fire resistance of not less than two hours under the following conditions:

(a) Rooms containing steam boilers carrying a pressure of more than fifteen pounds per square inch and having a rating in excess of ten boiler horsepower.

(b) Rooms containing heating plants or steam boilers in buildings having a capacity exceeding 200 persons.

62-4.3. Except as provided in sections 62-4.1 and 62-4.2, rooms containing heating plants or steam boilers shall be enclosed with walls, partitions, floors and ceilings providing fire resistance of not less than one hour. Walls, partitions and floors shall be constructed of non-combustible materials.

62-4.4. Openings in enclosures of heating plants and boiler rooms shall be limited to those essential to the use of the room. All such openings shall be protected with self-closing Class B fire doors or other approved opening protective assemblies complying with the requirements of section 65-5.

62-5. (a) Public Corridors and Area Separations.

(1) In Business, Mercantile, Industrial and Storage Units partitions, floor construction and ceiling construction enclosing public corridors shall be of construction providing fire resistance of not less than one hour with doors not less fire resistive than one and three-fourths inch solid slab doors or shall be constructed of non-combustible materials; provided, however, that wherever glass is used it shall be of a minimum thickness of $\frac{1}{4}$ inch.

(2) In Business, Mercantile, Moderate Hazard Industrial and Moderate Hazard Storage Units any area occupied by more than one person, firm or corporation, or for more than one business enterprise conducted by the same person, firm or corporation, in separate enclosures, or any one floor above the

first story shall be divided by partitions providing fire resistance of not less than two hours into areas not exceeding the following:

Buildings equipped throughout with an approved system of automatic sprinklers—20,000 square feet.

All other buildings—10,000 square feet.

(3) Enclosure of public corridors and area separations in other occupancies shall be as provided in the chapters of this code covering special occupancy requirements.

(b) Storage Rooms. In Multiple Dwellings, Institutional Units, and Assembly Units, all storage rooms exceeding 100 square feet in area shall be enclosed with partitions providing fire resistance of not less than two hours. Openings in such partitions shall be protected with Class C fire doors. [Amend. Coun. J. 1-20-50, p. 5758; 11-7-58, p. 8380.]

62-6. All load bearing partitions shall comply with the fire-resistive requirements established in section 49-8. Non-load bearing partitions shall comply with the provisions of sections 62-6.1 and 62-6.2.

62-6.1. Except as provided in section 62-6.2, non-load-bearing partitions other than those required for enclosures or separations as provided in sections 62-3, 62-4 and 62-5 shall comply with the following minimum requirements:

(a) In buildings of Types I-A, I-B, I-C and II construction, partitions shall be of non-combustible materials.

(b) In buildings of Type III-A construction, partitions shall be of heavy timber construction providing fire resistance as required for floor construction or roof construction above or shall be of non-combustible materials.

(c) In buildings of Types III-B and IV-A construction, partitions shall be of either of the following types:

(1) Combustible construction protected to provide fire resistance of not less than one-half hour.

(2) Non-combustible construction.

[Amend. Coun. J. 3-14-57, p. 4431.]

62-6.2. Partitions of combustible materials may be used for subdividing offices and similar spaces occupied by a single tenancy, provided that the total area of combustible portions of such partitions measured as area of partition construction shall not exceed twenty-five per cent of the subdivided space.

62-7. Exterior trim shall comply with provisions of sections 62-7.1 to 62-7.4, inclusive.

62-7.1. Exterior trim shall be construed to include exterior wall decorations, cornices, gutters, leaders, balconies, storm enclosures and all ornamental elements accessory to the structural building frame.

62-7.2. (a) Cornices, gutters and leaders hereafter erected on all buildings in Fire District No. 1 or on buildings exceeding forty feet in height in any fire district shall be constructed of non-combustible materials.

(b) Cornices of combustible materials, except on buildings of Types IV-A and IV-B construction and on Single-Family Dwellings of any construction type shall be covered with non-combustible materials when located on a wall facing an interior lot line at a distance of less than three feet.

62-7.3. The floor, roof and wall construction of balconies and bay windows shall conform to the requirements of the type of construction required for the building to which they are attached.

62-7.4. Porches constructed of combustible materials shall be permitted when attached to Residential Units of Types III-B, III-C, IV-A or IV-B construction with the following limitations:

(a) Porches shall not exceed three stories in height.

(b) Porches shall not project more than ten feet from the building nor exceed 150 square feet in area per dwelling unit. [Amend. Coun. J. 3-14-57, p. 4431.]

- (c) Porches shall be located not less than six feet from an interior lot line.
- (d) Porches of combustible construction shall not be hereafter erected in Fire District No. 1.

62-8. All roof coverings shall comply with the provisions of sections 62-8.1 to 62-8.3, inclusive.

62-8.1. All roof coverings shall be classified in accordance with their fire-resistant properties as follows:

- Class A. Roof coverings effective against severe fire exposure.
- Class B. Roof coverings effective against moderate fire exposure.
- Class C. Roof coverings effective against light fire exposure.

62-8.2. The classification of any specific material shall be determined as provided in section 65-7.

62-8.3. The use of roof coverings shall be governed by the requirements of chapter 50, Location Limitations.

62-9. Interior wall and ceiling finish and trim shall comply with the requirements of sections 62-9.1 to 62-9.6, inclusive.

62-9.1. Interior wall and ceiling finishes, as herein referred to, are defined as those materials applied over wall, partition and ceiling construction on the inside of a building or subdivision thereof including finishes utilized for decoration, acoustical correction, surface insulation and similar purposes. Wall finishes not exceeding twenty per cent of the wall area and ceiling finishes not exceeding ten per cent of the ceiling area of a room or space shall be classified as interior trim. Surface decoration consisting of paint, paper or similar surface treatment applied directly to the finish without intervening air space shall not be considered as a part of interior wall and ceiling finish unless such surface treatment is required for the purpose of increasing fire resistance.

62-9.2. Interior trim, as herein referred to, is defined as including mouldings, cornices, wainscoting and other wall and ceiling finishes not exceeding twenty per cent of the wall area or ten per cent of the ceiling area of a room or space. Interior trim shall not include the following:

- (a) Doors and frames.
- (b) Window sash and frames.
- (c) Casings not exceeding four inches in width around door and window openings.
- (d) Baseboard not exceeding six inches in height.

62-9.3. (a) All materials used for interior wall and ceiling finish and for interior trim shall be classified in accordance with flame spread characteristics into the following classifications:

<i>Classification</i>	<i>Flame Spread Rating</i>
Class 1	0 to 15
Class 2	16 to 30
Class 3	31 to 60
Class 4	61 to 160

(b) The classification of any specific material shall be determined in accordance with test procedure as provided in section 65-8.

62-9.4. Except in buildings of Type III-A, III-C or IV-B construction, all interior wall and ceiling finish shall be applied directly and securely to a non-combustible base or to furring or nailing strips not exceeding one inch in nominal thickness applied over a non-combustible base with all spaces behind the material filled with a non-combustible material or firestopped at intervals not exceeding eight square feet in area. In buildings of Type III-A construction, interior wall and ceiling finish shall be applied directly to the wall or floor construction.

62-9.5. Materials used for interior wall and ceiling finish shall be not less resistant to flame spread than the class of materials specified in this section:

(a) Stairways, elevator shafts, and enclosed connections from such stairway to outside exits of all buildings, Class 1.

(b) Institutional units, Class 1.

(c) Residential units, Class 1.

(d) Business units, industrial and storage units, Class 3.

(e) Assembly and mercantile units having a capacity exceeding 100 persons, Class 1.

(f) Public lobbies required as a means of exit in buildings of all occupancies having a capacity of more than 100 persons, and in all public corridors required as a means of exit, Class 1.

(g) All other rooms and spaces, materials used for interior wall and ceiling finish shall be not less resistant to flames spread than Class 4 materials, provided, however, that Class 3 and Class 4 materials shall be limited in area as follows:

(1) The total surface area of Class 3 materials used for interior wall and ceiling finish in any building shall not exceed 7500 square feet except that when a building is divided into areas separated by partitions, floor and ceiling construction providing fire resistance of not less than two hours with all partition openings protected by Class C fire doors, interior wall and ceiling finish of Class 3 materials not exceeding 7500 square feet in surface area may be used in each area so separated.

(2) The total surface area of Class 4 material used for interior wall and ceiling finish in any building shall not exceed 5000 square feet except that when a building is divided into areas separated by partition, floor and ceiling construction providing fire resistance of not less than two hours with all partition openings protected with Class C fire doors, interior wall and ceiling finish of Class 4 materials not exceeding 5000 square feet in surface area may be used in each area so separated.

Exception: In Administrative Offices, Art Galleries, Libraries, and Restaurants and also in not more than one room of each Residential Unit, Class 4, interior finish materials (not more combustible than wood) may be used on walls only, subject to the approval of the division marshal in charge of fire prevention.

(h) The interior wall and ceiling in hazardous use units, now existing or hereafter constructed, shall be of non-combustible (Class I). [Amend. Coun. J. 5-11-54, p. 7442.]

62-9.6. Materials used for interior trim shall be not less resistant to flame spread than the class of materials specified in this section for the following rooms or spaces:

(a) Required stairway enclosures and enclosed connections from such stairways to outside exitsClass 2

(b) Assembly rooms or spaces having a capacity exceeding 1,000 personsClass 2

(c) Materials used for interior trim in all other rooms and spaces shall be not less resistant to flame spread than Class 4 materials.

62-10. Finished flooring of wood or other combustible materials shall comply with the requirements of section 62-10.1 to 62-10.5, inclusive.

62-10.1. When finished flooring or subflooring is attached to combustible sleepers, such sleepers shall be fire-stopped at intervals under the flooring not exceeding 100 square feet in area, and no open spaces shall extend under or through permanent walls or partitions.

62-10.2. In all cases where finished flooring is applied directly to the floor construction or to sleepers, a resilient insulating base not exceeding one-half inch in thickness and applied directly to the floor construction shall be permitted.

62-10.3. (a) In buildings of fire-resistive or non-combustible construction, all wood flooring and subflooring shall be applied directly to a floor construction of non-combustible material or may be attached to sleepers of combustible material. In buildings exceeding 100 feet in height, the space between the floor con-

struction and the finished flooring shall be solidly filled with non-combustible materials.

(b) Combustible composition flooring not exceeding one-half inch in thickness may be applied directly to the non-combustible floor construction or to subflooring.

62-10.4. (a) In buildings of heavy timber construction, all wood finished flooring and subflooring shall be applied directly to the floor construction or may be attached to sleepers of combustible materials provided that the space between the floor construction and the finished flooring is solidly filled with non-combustible materials.

(b) Combustible composition flooring not exceeding one-half inch in thickness may be applied directly to the floor construction or to subflooring.

62-10.5. In stairways required by section 67-10.4 to be of non-combustible construction, finish flooring of combustible materials shall not exceed one-fourth inch in thickness.

62-11. Except aerial supports, not exceeding twelve feet in height, flagpoles, water tanks, cooling towers and similar structures, all roof structures hereafter placed above the roof of any building within Fire District No. 1, or above the roof of any building exceeding fifty-five feet in height in any Fire District, shall be constructed of non-combustible materials and shall be supported by construction of non-combustible materials. Such structures shall also comply with the special requirements of sections 62-11.1 to 62-11.5, inclusive.

62-11.1. (a) Sashes and frames of skylights which are inclined more than thirty degrees from the vertical shall be constructed of non-combustible materials, except, as provided by the commissioner of buildings, in buildings where acid fumes deleterious to metal are incidental to the use of the building.

(b) All skylights, except in greenhouses, shall be glazed with wired glass having no single pane exceeding 720 square inches in area or forty-eight inches in any dimension.

(c) Walls of skylights and monitors shall be of construction not less fire resistant than required for the roof on which they are erected; provided, however, the walls which extend more than ten feet above the roof shall be constructed of non-combustible materials.

62-11.2. (a) A penthouse is hereby defined as an enclosed space located on a roof for the housing of a stairway or equipment used in the operation of a building such as tanks, fans or elevator machinery, but containing no habitable or storage space.

(b) Penthouses occupying an aggregate area exceeding one-third of the roof area shall be considered a story of the building and shall be subject to all applicable requirements of this code.

(c) Walls of penthouses located less than five feet from the exterior wall of the building shall provide fire resistance as required for the exterior wall. Walls of penthouses located five feet or more from the exterior wall of a building, except in buildings of Types II, IV-A and IV-B construction, shall provide fire resistance of not less than one hour.

(d) Roofs of penthouses shall provide fire resistance as required for the roof construction on which the penthouse is located.

62-11.3. Mansard or sloping roofs, the plane of which forms an angle of more than sixty degrees but not more than seventy-five degrees with the horizontal, shall be classified as roofs and shall comply with all applicable requirements of this code, except that such roofs, erected on buildings more than forty feet in height, of Types III-A, III-B or III-C construction shall be constructed of non-combustible materials providing fire resistance of not less than one hour.

62-11.4. (a) Towers are defined as structures, including spires, domes or cupolas, extending above the roof of a building and used only for architectural embellishment or for housing bells, clocks and similar installations.

(b) Every tower shall be of a type of construction not less fire resistant than required for the building on which it is erected and when exceeding the height limitations for the building as established in section 51-1.2.

(1) Towers exceeding sixty feet in height above grade shall be constructed of and supported by Types I-A, I-B or I-C construction.

(2) Towers exceeding twenty-five feet in height above the roof on which they are erected or exceeding 200 square feet in area at any horizontal section shall be constructed of and supported by non-combustible materials and shall be separated from the building below by a floor or roof deck providing fire resistance of not less than one hour.

62-11.5. Miscellaneous roof structures, including dormers, bulkheads, scuttles and similar structures shall be constructed of material not less fire resistant than required for the roof construction on which they are erected.

62-12. Firestopping, complying with the provisions of sections 62-12.1 to 62-12.8, inclusive, shall be designed and constructed to close all concealed draft openings and to form effective fire barriers between stories of every building and in all concealed spaces therein against the spread of fire.

62-12.1. All firestopping shall be constructed of non-combustible materials, except that firestopping of wood not less than two inches in nominal thickness shall be permitted in open spaces of wood framing.

62-12.2. Walls, including masonry walls furred with combustible material, and stud partitions shall be effectively firestopped at floors, ceilings and roofs.

62-12.3. Concealed roof spaces of combustible construction shall be divided into horizontal areas of not more than 3,000 square feet by construction providing fire resistance of not less than one-half hour.

62-12.4. When stairs are of wood or of combustible construction, the space between stair stringers shall be firestopped at top and bottom and at least once in the middle of each run, and firestopping shall also be provided between studs of adjoining partitions along and in line with the run of stairway.

62-12.5. Floors and roofs constructed of combustible materials shall be firestopped at walls and partitions and where openings occur.

62-12.6. Spaces between chimneys and wood framing shall be firestopped with approved non-combustible material.

62-12.7. Openings around exposed pipes or power shafting shall be filled with approved non-combustible material, or shall be closed off by close-fitting metal caps at the ceiling and floor line, and on each side of a wall or partition.

62-12.8. Opening for belts and conveyors shall be provided with approved slotted doors or be otherwise closed off. [Amend. Coun. J. 3-14-57, p. 4431.]

CHAPTER 63

CHIMNEYS, FLUES AND VENTS

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63-1. Except electric heating appliances and as otherwise provided for gas appliances in section 63-11, every heating apparatus or heat producing appliance shall be connected with a flue complying with the provisions of this chapter.

63-1.1. (a) Chimney. A structure which is primarily vertical and encloses one or more flues for the removal of the products of combustion.

(b) Interior Chimney. An interior chimney is a chimney built within the walls of a building and having lateral support from the building structure.

(c) Exterior Chimney. An exterior chimney is a chimney built outside the walls of a building but receiving lateral support from the exterior walls of the building.

(d) Isolated Chimney. An isolated chimney is any chimney other than an interior or exterior chimney. It is also that part of an interior or exterior chimney that projects above the walls of a building which give it lateral support. Guys or struts shall not be considered as lateral support for the purpose of this definition.

(e) Flue. An enclosed passageway in a chimney or smokestack used for the removal of the products of combustion.

(f) Smoke Pipe. A pipe or breeching which is primarily horizontal and which connects a heating appliance to a flue.

(g) Vent Pipe. As applied to a heating appliance, a pipe for the removal of products of combustion from a gas-fired appliance.

63-1.2. The provisions of this chapter, governing the use of specifically accepted materials, shall not be interpreted as precluding the use of other materials having equivalent structural, fire-resistive, refractory and insulating properties.

63-1.3. Minor emergency repairs for the purpose of maintenance and upkeep which do not increase the capacity of heating apparatus or appliances or which do not involve structural changes in the permanent chimneys and flues of a building may be made without a permit.

63-1.4. The commissioner of buildings may require tests of all chimneys, smokestacks, smoke pipes, and flues to insure gas, smoke and flame tightness.

63-1.5. Chimneys shall be so constructed as to permit necessary cleaning. Whenever a new flue is completed or an existing flue is altered, it shall be cleaned and left smooth on the inside.

63-2. Chimneys shall be classified according to provisions of sections 63-2.1 to 63-2.4, inclusive.

63-2.1. Chimneys for warm air, hot water and low pressure steam heating plants, and other low heat appliances shall be classified as low temperature.

63-2.2. Chimneys for high pressure steam boilers, smokehouses and other medium heat appliances other than incinerators shall be classified as medium temperature.

63-2.3. Chimneys for high heat appliances, including brass furnaces, porcelain baking kilns and similar installations shall be classified as high temperature.

63-2.4. In determining the classification of any appliance, the standards of the recommended Building Code of the National Board of Fire Underwriters, 1955 edition, appendix 1, shall be considered as accepted engineering practice. [Amend. Coun. J. 3-14-57, p. 4431.]

63-3. (a) Chimneys shall be constructed of masonry, reinforced concrete, metal or other approved non-combustible materials.

(b) Chimneys shall be constructed to resist all loads, including wind loads, as required by chapter 68, without exceeding the allowable stresses for the materials as provided in chapters 71, 73 and 74, and shall also comply with the special requirements of this chapter. Stresses due to combined wind and other loads shall be provided for without exceeding allowable unit stresses. No tension shall be allowed in the masonry of chimneys built of solid masonry units or perforated radial brick unless proper steel reinforcement shall be provided.

63-4. Height of chimneys shall comply with the provisions of sections 63-4.1 to 63-4.3, inclusive.

63-4.1. Low temperature chimneys shall extend to a height not less than three feet above the roof at the point of intersection and not less than two feet above any roof within ten feet of such chimney, except that chimneys located on a roof having a slope of more than fifteen degrees may extend not less than two feet above the ridge.

63-4.2. Medium temperature chimneys shall extend to a height of not less than ten feet above any roof within a horizontal distance of twenty-five feet.

63-4.3. High temperature chimneys shall extend to a height of not less than twenty-five feet above any roof within a horizontal distance of fifty feet.

63-5. Flues shall comply with the provisions of sections 63-5.1 and 63-5.2.

63-5.1. The cross-sectional area of a flue for an oil or solid-fuel fired appliance shall be designed and proportioned for the conditions of temperature within and without the flue, insulation quality of walls, weather exposure, shape, material of construction, and all other determining factors. The standards set forth in the "Heating, Ventilating and Air Conditioning Guide," American Society of Heating and Ventilating Engineers, 1947 Edition, shall be deemed accepted engineering practice in determination of flue sizes.

63-5.2. (a) Except for vents from gas appliances, nothing in this section shall prohibit the joining of two or more pipes for a single flue connection, provided that smoke pipes and flues are of sufficient size to serve all the appliances thus connected, and that the several smoke pipes are constructed to comply with the severest requirements for any one of those connected.

(b) The smoke pipe of a heating appliance shall not be connected into the flue of an incinerator which has the rubbish chute identical with the smoke flue.

63-6. Flue linings where required in this chapter shall be of refractory materials which will withstand the action of flue gases and resist, without softening or cracking, the temperatures to which they will be subjected but not less than 2000 degrees Fahrenheit. Flue linings shall be classified as provided in sections 63-6.1 to 63-6.3, inclusive.

63-6.1. Type 1 flue linings shall have fire-resistive, refractory and insulating properties equivalent to flue linings of shale brick not less than three and three-fourths inches thick. There shall be an air space of at least two inches between such linings and the chimney wall. The thickness of the independent lining shall not be considered as a part of the required thickness of the wall.

63-6.2. Type 2 flue linings shall have fire-resistive, refractory and insulating properties equivalent to flue linings of fire clay units not less than five-eighths inch thick, laid in fire clay mortar, or in Type A or Type B mortar as defined in chapter 71.

63-6.3. Type 3 flue linings shall be of materials having structural, fire resistive, refractory and insulating properties equivalent to solid fire clay masonry units not less than three-quarters inch thick laid in fire clay mortar.

63-7. Masonry chimneys shall comply with the provisions of sections 63-7.1 to 63-7.5, inclusive.

63-7.1. (a) Materials. Masonry chimneys shall be built of either solid masonry units or perforated radial brick of special design adapted to chimney construction where the average amount of perforations does not exceed thirty per cent. Either of the above units shall be considered as solid masonry units and the determination of all stresses shall be based on gross areas. Where special perforated radial brick is employed it shall be assumed not to weigh in excess of 110 pounds per cubic foot. Masonry shall be laid in Type A, B or C mortar as defined in chapter 71.

(b) Chimney Caps. The walls of masonry chimneys shall be capped with approved non-combustible weatherproof materials.

(c) Supports. Masonry chimneys shall be wholly supported on non-combustible construction providing fire resistance of not less than three hours.

(d) Corbeling. No chimney shall be corbeled from hollow or cavity wall construction, nor from a wall built of hollow masonry units.

(e) Clearances. Combustible framing shall be trimmed away from all flues and chimneys, and no combustible material shall be placed within two inches of any chimney, nor within six inches of any outlet to such chimney.

63-7.2. (a) Wall Thickness. Walls of low temperature masonry chimneys shall be not less than seven inches thick except that chimneys containing no flue exceeding 150 square inches in net area may have walls not less than three and one-half inches thick. Thickness of walls as herein required shall not include flue linings.

(b) Lining.

(1) Low temperature masonry chimney flues not exceeding a net area of 700 square inches shall be lined with Type 3 flue lining, extending to the top of the chimney from a point not less than eight inches below the intake or from the throat of a fireplace.

(2) Low temperature masonry chimney flues exceeding a net area of 700 square inches shall be lined with Type 1 flue lining, extending from a point not less than two feet below the bottom of the breeching to the top of the chimney or to a point not less than thirty feet above the top of the breeching.

63-7.3. Walls of medium temperature masonry chimneys shall be not less than seven inches thick. Medium temperature masonry chimney flues not exceeding a net area of 700 square inches shall be lined with Type 2 flue lining. Medium temperature masonry chimney flues exceeding a net area of 700 square inches shall be lined with Type 1 flue lining. Flue linings shall extend from a point not less than two feet below the bottom of the breeching to the top of the chimney or to a point not less than thirty feet above the top of the breeching.

63-7.4. High temperature masonry chimneys shall be built with double masonry walls, each not less than eight inches thick, including flue lining, and with an air space of not less than two inches between them. The interior walls of the double-wall construction shall be lined with Type 1 flue lining.

63-7.5. (a) Non-Fuel Fired Incinerator Chimneys. Masonry chimneys for non-fuel fired incinerators, erected in buildings of residential, institutional, church, school and restaurant occupancy shall be constructed as herein required.

(1) When the grate area of the combustion chamber does not exceed nine square feet and the height of the building does not exceed three stories, the flue shall be enclosed with not less than three and one-half inches of masonry and lined with Type 2 flue lining extending the entire height of the flue.

(2) When the grate area of the combustion chamber exceeds nine square feet or is installed in a building exceeding three stories in height, the chimney shall be constructed as required for fuel-fired incinerator chimneys in paragraph (b) of this section.

(b) Fuel-Fired Incinerator Chimneys. Masonry chimneys for fuel-fired incinerators shall be lined with Type 1 flue lining extending to the top of the chimney or to a point not less than forty feet above the roof of the combustion chamber. The walls of the chimney, including the flue lining, shall be not less than eight inches thick.

(c) Connections to Other Flues. Nothing in this section shall prohibit the connection of an incinerator by means of an approved breeching to a smoke-stack or chimney flue which serves a heat appliance; provided the cross-sectional area of such stack or flue is at least four times that of the incinerator breeching and that such stack or flue and the connection meet the requirements of this section.

63-8. Metal chimneys, except special chimneys as defined in section 63-9, shall comply with the provisions of sections 63-8.1 to 63-8.6, inclusive.

63-8.1. Metal chimneys erected on the exterior of a building or structure shall be supported on an independent masonry or reinforced concrete foundation. Interior metal chimneys may be supported on Type I-A construction at intermediate levels.

63-8.2. Metal chimneys shall be of riveted or welded construction. Thickness of metal shall be adequate to resist all loads, including wind loads as required in chapter 68 without exceeding the allowable stresses for the metal as provided in chapter 74, but shall be not less than the following minimum thickness.

<i>Area of Chimney (Square Inches)</i>	<i>Minimum Thickness of Metal</i>
Less than 155	14 gauge
155 to 254	12 gauge
255 to 455	3/16 inch
More than 455	1/4 inch

63-8.3. Metal work of chimneys shall be galvanized or painted with an approved paint or constructed of approved corrosion-resistive alloys.

63-8.4. All high temperature metal chimneys as defined in section 63-2 shall be lined with four and one-half inches of fire brick laid in fire clay mortar extending at least twenty-five feet above the smoke pipe entrance.

63-8.5. (a) Clearances. Every exterior metal chimney or part thereof, erected on the exterior of a building, shall have a clearance from the wall of at least twenty-four inches if the wall is of combustible construction and a clearance of at least four inches if the wall is of non-combustible construction, except that when the chimney is insulated with approved materials, the specified clearances may be reduced by one-third.

(b) Location. No exterior metal chimney shall be located less than twenty-four inches in any direction from a wall opening, exitway or fire escape.

63-8.6. (a) Protection. Every interior metal chimney, or part thereof, erected within a multi-story building shall be enclosed in all stories, above that story in which the appliance served thereby is located, with walls providing fire resistance of not less than three hours. A continuous air space not less than four inches wide and extending through the roof shall be provided on all sides between the stack and the enclosing walls.

(b) Thimbles. Where an interior metal chimney passes through a combustible roof, it shall be guarded by an approved non-combustible, ventilating thimble that extends at least nine inches below and above the roof construction. The thimbles shall be of a size to provide clearance on all sides of the chimney of not less than six inches for low temperature stacks and not less than eighteen inches for medium and high temperature stacks.

63-9. Special low temperature chimneys constructed of double shells of approved corrosion-resistive metals or alloys with an intermediate air space or of metal, cement-asbestos pipe or other approved corrosion-resistive materials insulated with approved non-combustible materials may be used under the following conditions:

(a) Chimneys shall be so designed and protected as to prevent a temperature rise under the conditions of their use of more than 160 degrees Fahrenheit above room temperature on the exterior surface. Chimneys shall be approved only when the fire resistance, insulation, durability and other necessary qualities of the assembly have been determined by tests satisfactory to the commissioner of buildings.

(b) Chimneys may be supported on combustible construction when installed in one-story buildings and passing only through the roof construction or through ceiling and roof construction separated by an unoccupied attic space.

(c) Chimneys and flues approved for specific conditions of use in the "List of Inspected Fire Protection Equipment and Materials," Underwriter's Laboratories, Inc., 1948, shall be acceptable as meeting the requirements of this section. The use of other special chimneys meeting the required test standards shall not be precluded.

63-10. Chimneys, stacks or flues, including incinerator stacks, which emit sparks that create a fire hazard, shall be provided with a spark arrester of approved non-combustible construction in which the maximum size of mesh shall not exceed one-half inch. The total open area of spark arresters shall be not less than four times the flue area.

63-11. Flues and vents for gas appliances shall comply with the provisions of sections 63-11.1 to 63-11.5, inclusive. [Amend. Coun. J. 1-20-50, p. 5758.]

63-11.1. Every gas appliance shall be connected to an effective flue or vent complying with the provisions of section 63-11.2 if it is included in any of the following classifications:

(a) Any appliance used for domestic purposes having a rating in excess of 50,000 Btu per hour, except ranges of types as follows:

(1) Manually controlled ranges.

(2) Ranges equipped with automatic means for turning off the gas supply to one or more burners.

(3) Ranges equipped with automatic means for turning on the gas supply to one or more burners, provided such burners are furnished with automatic ignition means and equipped with an automatic pilot.

(b) Automatically controlled appliances which use more than 5,000 Btu per hour; and automatically controlled appliances which use less than this amount unless equipped with an automatic pilot; except automatically controlled appliances of types as follows:

(1) Instantaneous water heaters which supply water to a single faucet which is attached to and made part of the appliance (no other outlet being provided to which may be attached a water supply that can result in distant operation of the water gas valve).

(2) Automatically controlled appliances with devices or controls governing the gas supply to the main burner or burners which cannot automatically reduce the supply below 30% of the maximum "demand."

(c) Appliances, not including domestic gas ranges, installed in the same room which if not vented would make the total input rating of the unvented gas appliances as great as 30 Btu per hour per cu. ft. of room content.

(d) Room or space heaters installed in sleeping quarters for use of transients except room heaters which have a sealed combustion chamber and which are installed in such a manner that all air for combustion is derived from outside the space being heated and all products of combustion are discharged to the outside atmosphere.

(e) All gas-fired incinerators.

63-11.2. (a) Type A Flues.

Type A flues shall include chimneys complying with the requirements of this chapter. Type A flues shall be required for:

(1) Incinerators.

(2) Appliances which may be converted readily to the use of solid or liquid fuel.

(3) Boilers and furnaces, except where specific approval is obtained from the commissioner of buildings for the use of vent piping.

(4) All other appliances except approved appliances which produce flue gas temperatures not in excess of 550 degrees F. at the outlet of the draft hood when burning gas at the manufacturer's input rating.

(b) Type B Vent Piping.

(1) Type B vent piping shall include approved vent piping of non-combustible, corrosion-resistant material of adequate strength and heat insulating value and having bell and spigot or other acceptable joints. Type B vent piping shall be used only with approved gas appliances which are not required by paragraph (a) above to be vented to Type A flues.

(2) Type of vent piping tested on List of Inspected Gas, Oil and Miscellaneous Appliances, Underwriters' Laboratories, Inc., 1956, shall be considered as accepted engineering practice.

(3) Type B vent piping shall be installed with a clearance to combustible material or construction whether plastered or unplastered, of not less than one inch, provided that for vents of floor furnaces, water heaters and space heaters such clearance shall be not less than three inches for a distance of not less than three feet from the outlet of the draft hood.

(4) Suitable provision shall be made to prevent mechanical injury to Type B vent piping where it extends through walls, floors or roofs.

(c) Other Vent Piping.

(1) Vent piping of sheet copper of not less than 24 U. S. gauge, or of galvanized iron of not less than 20 U. S. gauge, or of other approved corrosion-resistant material may be used for runs directly from the space in which the appliance is located through a roof or exterior wall to the outer air. Such vent pipes shall not pass through any attic or concealed space nor through any floor or partition.

(2) Vent piping other than approved Type B shall not pass through combustible rooms or walls unless they are guarded at the point of passage by double metal ventilated thimbles not less than six inches larger in diameter than the pipe, or by double metal thimbles not less than four inches larger in diameter than the pipe with the annular space filled with approved non-combustible insulating material; or in lieu of such protection, all combustible material in the wall or partition shall be cut away from the vent pipe a sufficient distance to provide the clearance required from such vent pipe to combustible material. Any material used to close such opening shall be non-combustible.

(3) Clearances from combustible material to gas appliance vent piping other than approved Type B shall be as required for the appliance served as provided in chapter 80.

[Amend. Coun. J. 3-14-57, p. 4431.]

63-11.3. The cross-sectional area of a flue or vent for a gas-fired appliance shall be at least one square inch per 7,500 hourly Btu input, with a minimum diameter of three inches.

63-11.4. Every flue-connected appliance except an incinerator shall be equipped with an effective draft hood which will insure the ready escape of the products of combustion under any draft condition, prevent a back draft from entering the appliance and neutralize the effect of stack action of the chimney flue upon the operation of the appliance. Draft hoods shall not be required when the integral construction of the equipment is approved by The American Gas Association as serving the same purpose.

63-11.5. A vent from a gas appliance shall not be connected to a smoke-pipe but may be connected to another vent pipe or flue when such gas appliance is equipped with an automatic device to prevent the escape of unburned gas at the main burner or burners.

63-12. Fireplaces shall comply with the provisions of sections 63-12.1 to 63-12.5, inclusive.

63-12.1. The back and jambs of a fireplace shall be constructed of solid masonry or reinforced concrete with a lining of fire brick or other approved non-combustible materials. The total thickness of the construction including lining shall be not less than eight inches. Linings may be omitted when the solid masonry or reinforced concrete is at least twelve inches thick or when an approved metal fireplace unit is installed.

63-12.2. Every fireplace shall be provided with a hearth of non-combustible materials.

63-12.3. Every fireplace shall be equipped with an approved damper.

63-12.4. (a) All header and trimmer beams of combustible floor construction shall be located at least two inches from the face of chimneys and backs of fireplaces, and the intervening spaces shall be firestopped by filling with approved non-combustible material.

(b) Wood or other combustible material shall not be installed on or about a fireplace less than six inches from the fireplace opening.

63-12.5. The maximum depth of any imitation fireplace or recess for heating equipment shall be six inches, unless such recess meets all the construction requirements of this article for fireplaces. The surfaces of the recess shall be of non-combustible fire-resistive material, and all combustible materials shall have the clearances required herein. No flue other than an approved gas vent shall be installed within such imitation fireplace or recess.

CHAPTER 64

FIRE EXTINGUISHING APPARATUS

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|------------------------------|--|
| 64-1. Sprinkler systems | 64-3. Local fire alarm systems |
| 64-1.1. General requirements | 64-4. Standard fire extinguishers |
| 64-1.2. Special requirements | 64-4.1. Where required |
| 64-1.3. Hazardous use units | 64-4.2. Location of fire extinguishers |
| 64-2. Standpipes | 64-4.3. Penalty |

64-1. Automatic sprinkler systems complying with the requirements of chapter 91 shall be installed where required by the provisions of sections 64-1.1 to 64-1.3, inclusive.

64-1.1. Automatic sprinkler systems shall be installed throughout every building having a floor area exceeding the maximum areas established in section 51-2.

64-1.2. Automatic sprinkler systems shall be provided in the following buildings and areas:

(a) Shops and Store Rooms. All rooms and spaces used as paint shops, waste paper baling or storage, and similar storage hazards except in the following cases:

(1) When such room or space is located in a Single or Two Family Dwelling.

(2) When such room or space does not exceed 1,000 square feet in area and is located in a one-story building.

(b) Basements. Basement space used for storage of combustible material, except rooms or spaces having an area not exceeding 5,000 square feet and enclosed with partitions providing fire resistance of not less than two hours.

(c) Stage Blocks. Every part of Type 1 stage block, including locations below each fly gallery, beneath the stage ceiling or roof, and above the proscenium opening and including also all work-shops, storage rooms, property rooms and dressing rooms.

(d) Garages.

(1) Any basement garage space having a capacity of more than three vehicles.

(2) Garages having a storage capacity of twenty or more vehicles and located in buildings in which stories above such garage are designed or used for other occupancies.

(3) All garages exceeding four stories in height.

(e) Basement spaces in any department store and all floors of department stores two stories or more in height.

(f) All buildings of Types II, III-A and III-B construction having unlimited areas as provided in Table 51-2.2, except buildings of Low Hazard Industrial or Storage occupancies.

(g) On or before January 1, 1956, in every existing or pre-ordinance building used in whole or in part as a hotel which does not comply with section 52-2 (a) of this code.

(h) On or before January 1, 1960 in every existing, pre-ordinance building and buildings hereafter erected, two stories or more in height, used in whole or in part as Type I school, or used in whole as Type II school, and hospitals, infirmaries, nursing homes, nurseries, orphanages, sheltered-care homes, sanatoria and homes for the aged, as defined in section 48-3 of the code as Class B Institutional Units, and each of construction Type III-A, III-B, III-C, IV-A, IV-B. Such installation shall include basement areas. [Amend. Coun. J. 7-26-55, p. 881; 1-21-59, p. 9627.]

64-1.3. Requirements for sprinkler systems in Hazardous Use Units shall be as provided in chapter 60.

64-2. Standard inside standpipe systems complying with the requirements of chapter 92 shall be provided in all buildings exceeding eighty feet in height with the following exceptions:

(a) *Institutional Units*. In Institutional Units standpipes shall be provided in all buildings more than four stories or fifty-five feet in height.

(b) *Stage Blocks.* In stage blocks standpipes shall be provided on each side of the stage, on each tier of dressing rooms, and within fifty feet of all property rooms, store rooms or work rooms.

(c) *Storage Structures.* Standpipes shall not be required in grain elevators or similar storage structures where such standpipes are ineffective owing to the type of structure and inaccessibility of hose connections.

For the purpose of determining standpipe requirements, the height of a building shall be determined in accordance with the provisions of section 51-1.1. Towers, steeples, tanks and similar structures not intended or used for human occupancy shall not be considered in determining the height.

64-3. (a) Fire alarm systems conforming to the requirements of chapter 90 of this code shall be provided in buildings of the following occupancies:

(1) Hotels having a capacity of more than twenty-five persons above the second floor except in buildings of Types I-A, I-B or I-C construction.

(2) Institutional Units more than one story high.

(3) Schools more than one story high.

(b) A city fire alarm box shall be located within a distance of 100 feet from the principal entrance of every institutional building or theater and every assembly unit other than a theater having a capacity of more than 1,000 persons, and every existing or pre-ordinance building and every building hereafter erected, two stories or more in height, used in whole or in part as a Type I school with 100 or more occupants or used in whole as a Type II school. The fire alarm systems provided for herein shall be directly connected to the city fire alarm box.

(c) There shall be installed and maintained in every theater inter-communicating systems of telephones with stations on each floor of public space, on each side of the stage, in the engine room and boiler room, in the manager's office, and in the projection room.

[Amend. Coun. J. 1-21-59, p. 9627.]

64-4. Standard fire extinguishers complying with the requirements of chapter 90 shall be provided in accordance with the provisions of sections 64-4.1 and 64-4.2.

64-4.1. One standard fire extinguisher shall be provided on every floor, basement and sub-basement of all buildings and structures for each 4,000 square feet of floor area or fraction thereof with the following exceptions:

(a) Single Family and Two-Family Dwellings. Fire extinguishers shall not be required in Single-Family and Two-Family Dwellings.

(b) Multiple Dwellings. Fire extinguishers shall not be required in Multiple Dwellings not exceeding three stories in height and having a floor area not exceeding 4,000 square feet.

(c) Business, Mercantile, Industrial and Storage Units. Fire extinguishers shall not be required in one-story buildings of Business, Mercantile, Industrial or Storage occupancy, having a floor area not exceeding 4,000 square feet.

(d) Stage Blocks. In stage blocks, one fire extinguisher, one fire axe and one pike pole shall be provided on each side of the stage, on each gallery above the stage level, on the gridiron and in accessible places below the stage.

(e) Projection Rooms. In motion picture projection rooms, one fire extinguisher and one fire axe shall be provided.

(f) Open Air Assembly Units. In Open Air Assembly Units one fire extinguisher shall be provided for each 10,000 capacity or fraction thereof.

(g) Hazardous Use Units. Fire extinguishers shall be provided in accordance with the requirements of chapter 60.

64-4.2. Fire extinguishers where required shall be so located as to be within seventy-five feet of any portion of a floor or space. Not less than one fire extinguisher shall be located within every assembly room having a capacity of three hundred persons or more, except that such extinguisher may be located in a corridor within fifteen feet of a doorway to such assembly room.

64-4.3. Any person who shall violate any of the provisions of this chapter shall be fined not less than \$10.00 nor more than \$200.00 for each offense and every day on which such violation continues shall be regarded as constituting a separate offense. [Passed. Coun. J. 1-21-59, p. 9627.]

CHAPTER 65

FIRE RESISTIVE MATERIALS AND CONSTRUCTION

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 - 65-7.5. Identification
 - 65-8. Interior wall and ceiling finish and trim
 - 65-8.1. Test procedure
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 - 65-8.3. Smoke hazard

65-1. The provisions of this chapter shall govern the use and design of all materials and methods of construction with respect to required protection against fire exposure.

65-1.1. The requirements of this section shall constitute the minimum functional performance standards for fire protection purposes. Such requirements shall not be deemed to decrease or waive any requirements of this code with respect to safe load capacity, durability or other specified requirements.

65-1.2. All materials and forms of construction that develop the fire resistance required by this code shall be acceptable for fireproofing and construction purposes, except that no combustible component materials shall enter into the construction of structural units of structural assemblies in buildings of Types I-A, I-B, I-C and II construction or into the construction of any assembly required to provide fire resistance of two hours or more.

65-2. (a) *Combustible Material.* A material which will ignite when heated to a temperature at or below 1200 degrees Fahrenheit.

(b) *Fire Resistance.* Fire resistance as applied to building materials and construction means the ability to withstand fire or give protection from it for given periods under prescribed test conditions.

(c) *Fire-resistive Rating.* The degree of fire resistance of a fabricated unit or assembly of units of construction, determined by the standard fire test expressed in hours or fractions of an hour.

(d) *Flame-spread Rating.* The degree of flame resistance of materials used for interior finish and trim or for decorative purposes determined by the rate of flame spread in the standard tunnel test.

(e) *Non-combustible Material.* A material which will not ignite when heated to a temperature of 1200 degrees Fahrenheit.

[Amend. Coun. J. 3-14-57, p. 4431.]

65-3. Recognized Authoritative Agencies. The applicable test procedures of the following agencies are recognized as accepted engineering practice with respect to fire-resistive qualities of materials and assemblies:

American Standards Association
 American Society for Testing Materials
 National Board of Fire Underwriters

(ASA)
 (ASTM)
 (NBFU)

National Bureau of Standards, Department of Commerce
National Fire Protection Association
Underwriters' Laboratories, Inc.

(NBS)
(NFPA)
(UL)

65-4. (a) Test procedure. Where fire-resistive ratings of building materials and construction are required in this code, such fire-resistive ratings shall be determined by the test procedures and conditions of acceptance prescribed in the following document:

Fire Tests of Building Construction and Materials ASTM E119-1947

(b) Approved Materials and Construction.

(1) Materials and constructions listed in either of the following documents for specific fire-resistant ratings shall be acceptable as meeting the requirements of this code:

Fire-resistance Classifications of Building Constructions, Report
BMS 92, National Bureau of Standards, United States Department of
Commerce.

National Building Code of the National Board of Fire Underwriters,
1949 edition, Appendix A.

(2) Nothing in this section shall preclude the use of other materials and constructions meeting the required test standards.

65-5. Doors and shutters required as opening protective assemblies shall comply with the provisions of sections 65-5.1 to 65-5.8, inclusive.

65-5.1. Opening protective assemblies as applied to the requirements for doors or shutters shall include such doors or shutters together with their frames, hardware and other accessories essential to the fire-resistive rating of the assembly.

65-5.2. Where fire-resistive door and shutter assemblies are required by this code, the fire-resistive values of such assemblies and their classification shall be determined by the test procedure and the conditions of acceptance prescribed in the following document:

Fire Tests of Door Assemblies ASTM E152-41

65-5.3. Tests shall be made upon complete full-size samples of the assembly, including hanging and operating hardware, frames, bucks and other anchorage.

65-5.4. Doors and shutters shall be classified in accordance with their fire-resistive qualities in accordance with requirements of this section.

(a) Class A Doors and Shutters.

(1) Class A Doors and Shutters shall be used for protection of openings in firewalls and shall be installed on both sides of walls.

(2) There shall be no glass panels in Class A Doors and Shutters.

(b) Class B Doors and Shutters.

(1) Class B Doors and Shutters shall be used where required elsewhere in this code for protection of openings in vertical shafts and other openings.

(2) Class B Doors may have an observation panel of standard wired glass having an exposed area not exceeding 100 square inches and a width or height not exceeding twelve inches.

(c) Class C Doors.

(1) Class C Doors shall be used where required elsewhere in this code for protection of openings between rooms or between rooms and corridors.

(2) Class C Doors may have panels of standard wired glass. Exposed area of individual glass lights shall not exceed 1296 square inches.

(d) Class D and E Doors and Shutters.

(1) Class D and E Doors and Shutters shall be used where required elsewhere in this code for protection of openings in exterior walls.

(2) Glass lights for panels shall not be used in Class D doors. Panels of standard wired glass having an area not exceeding 720 square inches and a height not exceeding fifty-four inches may be used in Class E Doors.

65-5.5. Openings required to be protected by fire doors or shutters shall not exceed the heights, widths and areas established in Table 65-5.5.

TABLE 65-5.5. MAXIMUM SIZES OF FIRE DOORS AND SHUTTERS

Type of Door	Class of Door	Maximum Size of Opening Not to Exceed		
		Area Sq. Ft.	Height Ft.	Width Ft.
Hollow Metal, swinging, in pairs	A-B-C-D(1)-E(1)		10	8
Hollow Metal, swinging, in pairs	D(2)-E(2)		10	6
Hollow Metal, swinging, single	A-B-C-D -E		10	4
Hollow Metal, sliding	B-C		8	8
Metal Clad, paneled, swinging, in pairs	B-C-D(1)-E(1)		8	8
Metal Clad, paneled, swinging, in pairs	D(2)-E(2)		8	6
Metal Clad, paneled, swinging, single	B-C-D -E		8	4
Sheet Metal, sliding, single or in pairs	A-B-C-D(1)-E(1)	120	12	12
Sheet Metal, swinging, in pairs	A-B-C-D(1)-E(1)		12	10
Sheet Metal, swinging, in pairs	D(2)-E(2)		10	6
Sheet Metal, swinging, single	A-B-C-D(1)-E(1)		12	6
Sheet Metal, swinging, single	D(2)-E(2)		10	4
Steel, rolling or lift-up type	A-B-C-D(1)-E(1)	120*	12*	12*
Tin Clad, 3-ply, sliding	A	120	12	12
Tin Clad, 3-ply, swinging, in pairs	A		12	10
Tin clad, 3-ply, swinging, single	A		12	6
Tin Clad, 2-ply, counter-balanced	B		10	8
Tin Clad, 2-ply, sliding, single	B-C-D(1)-E(1)		10	10
Tin Clad, 2-ply, swinging, in pairs	D(1)-E(1)		10	10
Tin Clad, 2-ply, swinging, in pairs	D(2)-E(2)		10	6
Tin Clad, 2-ply, swinging, single	B-C-D(1)-E(1)		10	6
Tin Clad, 2-ply, swinging, single	D(2)-E(2)		10	4

NOTES:

- (1) Class D and E doors, other than doors leading to fire escapes.
- (2) Class D and E doors leading to fire escapes.

*Openings not exceeding twenty-four feet in width, twenty-four feet in height and 350 square feet in area shall be permitted when over-size openings are required for passage of motor vehicles, railroad cars and similar uses.

65-5.6. (a) Fire-resistive door and shutter assemblies for specific conditions of use in the "List of Inspected Fire Protection Equipment and Materials," Underwriters' Laboratories, Inc., 1956, shall be acceptable as meeting the requirements of this section.

(b) Nothing in this section shall preclude the use of other opening protective assemblies meeting the required test standards.
[Amend. Coun. J. 3-14-57, p. 4431.]

65-5.7. Approved protective assemblies shall be properly identified by label as conforming to the requirements of this section.

65-5.8. Installation of fire-resistive door and shutter assemblies shall comply with the requirements of the following document:

Protection of Openings in Walls and Partitions

NBFU-80—1939

65-6. Windows required as opening protective assemblies shall comply with the provisions of sections 65-6.1 to 65-6.9, inclusive.

65-6.1. Opening protective assemblies as applied to the requirements for windows shall include sash, frames, hardware and other accessories essential to the fire-resistive rating of the assembly.

65-6.2. Where fire-resistive windows are required by this code, the fire-resistive values of such windows shall be determined by test procedure. The required time-temperature curve and method of testing shall be similar to that required for fire doors and shutters in section 65-5. The duration of test on fire windows shall be not less than forty-five minutes and shall include a hose-stream test.

65-6.3. (a) Test assemblies shall be truly representative as to material, workmanship of the construction and details, including installation, glass size, method of closing, hardware, trim and finish.

(b) The fire-resistive rating derived from the test shall be assumed to apply to all like assemblies smaller in dimension and area than the test specimen and to larger sizes not exceeding the area of the test specimen by more than twenty-five per cent.

65-6.4. The fire resistance test shall not be regarded as successful unless the following conditions are met:

(a) The test assembly shall have remained securely in the opening during the fire exposure period and during the hose-stream test, except that small fragments of glass dislodged from the exposed surface by the hose stream shall not be considered a weakness. The fastening of ventilators or movable sections shall have remained secure.

(b) The test assembly shall have withstood the fire endurance test without passage of flame; and shall have withstood the fire endurance and hose-stream tests without the dislodgement of an excessive proportion of the glass area. A loss of approximately ten per cent shall not be considered excessive.

65-6.5. (a) Hollow metal windows shall consist of reinforced hollow metal sections and may be of double-hung, counter-balanced, pivoted, stationary, tilting, hinged or projected sash.

(b) Hollow metal windows shall not exceed the following sizes:

- (1) Single sash, other than casement, 5 ft. by 5 ft.
- (2) Double sash, other than casement, 5 ft. by 10 ft.
- (3) Casements, single, 3½ ft. by 10 ft.
- (4) Casements, pairs, 5 ft. by 10 ft.

(c) Individual glass lights in windows shall not exceed 720 square inches in exposed area, fifty-four inches in vertical dimension, and forty-eight inches in horizontal dimension.

65-6.6. (a) Solid section windows shall be constructed of rolled steel sections and may be equipped with ventilators of the same construction of the projected, tilting, pivoted or hinged type.

(b) Windows shall not exceed the following sizes:

(1) Standard fire windows of inside angle glazed type shall not exceed eighty-four square feet in area. Neither the height nor the width shall exceed twelve feet, provided that when installed with unprotected vertical steel mullions, the width shall not exceed seven feet.

(2) Light weight casement type shall not exceed six and one half feet in either dimension and, when installed with unprotected vertical steel mullions, the width shall not exceed three and one half feet.

(3) Intermediate weight casement types shall not exceed fifty square feet in area with neither dimension exceeding ten feet. When installed with unprotected steel mullions, the width shall not exceed six and one half feet.

(4) Detention type windows shall not exceed eighty-four square feet in area, with neither dimension exceeding twelve feet. When installed with unprotected vertical steel mullions, the width shall not exceed seven feet.

(c) Individual glass lights shall be glazed with standard wired glass and shall not exceed 720 square inches in exposed area, fifty-four inches in vertical dimension and forty-eight inches in horizontal dimension.

65-6.7. Windows constructed of a combination of hollow metal and solid section members, or a combination of hollow metal and plate steel members, shall conform to the requirements of hollow metal windows, section 65-6.5.

65-6.8. (a) Fire windows and accessory parts thereof approved for specific conditions of use in the list of "Inspected Fire Protection Equipment and Materials," Underwriters' Laboratories, Inc., 1948, shall be acceptable as meeting the requirements of this section.

(b) Nothing in this section shall preclude the use of other opening protective assemblies meeting the required test standards.

65-6.9. Approved protective assemblies shall be properly identified by label as conforming to the requirements of this section.

65-7. Roof coverings shall comply with the provisions of sections 65-7.1 to 65-7.5, inclusive.

65-7.1. Class A Roof Coverings shall be of material approved by the commissioner of buildings after satisfactory evidence that it is effective against severe fire exposures. Under such exposures, Class A roof coverings shall not be readily flammable; shall not carry or communicate fires; shall afford a fairly high degree of heat insulation to the roof deck; shall not slip from position; shall possess nonflying brand hazard; and shall not require frequent repairs in order to maintain their fire-resistive properties.

65-7.2. Class B Roof Coverings shall be of fire-resistive material, approved by the commissioner of buildings, after satisfactory evidence that it is effective against moderate fire exposures. Under such exposures, Class B roof coverings shall not be readily flammable; shall not readily carry or communicate fire; shall afford a moderate degree of heat insulation to the roof deck; shall not slip from position; shall possess no flying brand hazard; and shall require only infrequent repairs to maintain their fire-resistive properties.

65-7.3. Class C Roof Coverings shall be of material approved by the commissioner of buildings after satisfactory evidence that it is effective against light fire exposures. Under such exposures, Class C Roof coverings shall not be readily flammable; shall not readily carry or communicate fire; shall afford at least a slight degree of heat insulation to the roof deck; shall not slip from position; and shall possess no flying brand hazard; but may require occasional repairs or renewals in order to maintain their fire-resistive properties.

65-7.4. (a) Roof coverings which are classified as Class A, Class B or Class C in the "List of Inspected Fire Protection Equipment and Materials," Underwriters' Laboratories, Inc., 1956, shall be acceptable as meeting the requirements of this section for each respective class of roof covering.

(b) Nothing in this section shall preclude the use of other roof coverings meeting the required test standards.

[Amend. Coun. J. 3-14-57, p. 4431.]

65-7.5. Approved roof coverings shall be properly identified by label as conforming to the requirements of this section.

65-8. Interior wall and ceiling finish and trim shall comply with the provisions of sections 65-8.1 to 65-8.3, inclusive.

65-8.1. All interior wall and ceiling finish and trim shall be classified in accordance with resistance to spread of flame. Rate of spread of flame shall be determined by the tunnel-type test methods established in the following documents:

- (a) Bulletin of Research No. 32, Fire Hazard Classification of Building Materials. ULI, September, 1944.
- (b) Tentative Outline for Fire Hazard Classification of Building Materials. ULI, July, 1947.

65-8.2. (a) Interior wall and ceiling finish and trim shall be classified in accordance with flame spread ratings as follows:

Classification	Flame Spread Rating
Class 1	0 to 15
Class 2	16 to 30
Class 3	31 to 60
Class 4	61 to 160.

CHAPTER 66

LIGHT, VENTILATION AND SANITATION

- 66-1. Court and yard requirements
- 66-1.1. Definitions
- 66-1.2. Width and length of courts
- 66-1.3. Requirements of courts
- 66-2. Natural lighting
- 66-2.1. Means of natural lighting
- 66-2.2. Measurements of glass area
- 66-2.3. Required effective glass area
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- 66-3. Natural ventilation
- 66-3.1. General requirements
- 66-3.2. Means of natural ventilation
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- 66-5. Sanitation requirements
- 66-5.1. Minimum plumbing fixture requirements
- 66-5.2. Separate toilet facilities
- 66-5.3. Minimum number of water closets
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- 66-5.6. Minimum number of persons
- 66-5.7. Special fixture requirements
- 66-5.8. Location of fixtures
- 66-5.9. Location of toilet rooms
- 66-5.10. Toilet room construction

66-1. Every window required for natural light and every opening required for natural ventilation shall face directly on a public way or on a court complying with the provisions of sections 66-1.1 to 66-1.3, inclusive.

66-1.1. (a) Court. A court is an open, unobstructed space on the same lot with the building.

(b) Rear Court. A rear court is a court extending the entire width of the lot and extending from the building to the rear of the lot.

(c) Through Court. A through court is a court open at both ends to two open spaces, one of which shall be not less than thirty feet wide, the opposite not less than ten feet wide. The open spaces shall be public ways, yards, permanent easements, outer courts, or another through court or a combination of two or more such areas.

(d) Outer Court. An outer court is a court open on one end to an open space not less than thirty feet wide. The open space shall be a public way, yard or through court or any combination of two or more such areas.

(e) Inner Court. An inner court is a court entirely surrounded by building walls or lot lines or any court not defined as a through or outer court.

(f) Recess. A recess is an open area formed by the indentation of a wall of a court, such indentation having a depth of not more than one-half its length. [Amend. Coun. J. 11-7-58, p. 8380.]

66-1.2. (a) The depth of a rear court or yard shall be the average distance between the building wall and the rear lot line.

(b) The width of an inner court shall be the least horizontal dimension.

(c) The width of a through court or an outer court shall be the horizontal dimension measured in a direction approximately parallel with the open end of such court.

(d) The length of any court is the horizontal dimension measured in a direction approximately at right angles to the width. [Amend. Coun. J. 11-7-58, p. 8380.]

66-1.3. Except as provided in section 53-6 for Institutional Units, all courts required for natural light and ventilation shall comply with the following requirements:

(a) Rear courts. The depth of a rear court shall be not less than eight feet except that when the height of the court exceeds forty-eight feet the depth of the court shall be increased so that at any level the depth shall be not less than one-sixth the vertical distance from such level to the lowest point of the court; provided, however, that the depth of a rear court of any height shall not be required to exceed twenty feet.

(b) Through courts.

(1) The width of a through court shall be not less than six feet.

(2) When the height of a through court exceeds thirty-six feet, the width of such court shall be increased so that the width at any level shall be not less than one-sixth the vertical distance from such level to the bottom of the court; provided, however, that the width of a through court of any height shall not be required to be more than fifteen feet.

(3) Where the permanent required width of a through court between buildings on adjoining lots is assured as provided by the Chicago Zoning Ordinance, by permanent easements, or by the location of a modern permanent building on the adjoining lot, the width of the court may be measured between the permitted location of the walls of two buildings on adjoining lots, or the permitted location of the wall on the subject lot and the existing wall of a modern permanent building on the adjoining lot. In no case shall the wall of a through court be located less than three feet from an interior lot line, nor shall more than one-half the required width of such a through court be located on adjoining lot.

(4) When business or mercantile units are combined with residential units and the height of the court does not exceed twenty-five feet, the width of a through court or an outer court shall be not less than four feet measured between the wall of the building and an interior lot line.

(c) Outer courts.

(1) The width of an outer court shall not be less than eight feet.

(2) When the height of an outer court exceeds forty-eight feet, the width of such court shall be increased so that at any level the width shall be not less than one-sixth the vertical distance from such level to the bottom of the court; provided, however, that the width of an outer court of any height shall not be required to be more than twenty feet.

(3) When the permanent required width of an outer court between buildings on adjoining lots is assured as provided by provisions of the Chicago Zoning Ordinance, by permanent easements, or by the location of a modern permanent building on the adjoining lot, the width of the court may be measured between the permitted location of the wall of the subject building and the existing wall of a modern, permanent building on the adjoining lot. In no case shall the wall of an outer court be located less than four feet from an interior lot line, nor shall more than one-half of the required width of such an outer court be located on an adjoining lot.

(d) Inner Courts.

(1) The width of an inner court shall be not less than ten feet.

(2) When the height of an inner court exceeds thirty feet, the width of such court shall be increased so that the width at any level shall be not less than one-third the vertical distance from such level to the bottom of the court; provided, however, that the width of an inner court of any height shall not be required to exceed fifty feet.

(3) The horizontal area of an inner court shall be not less than one and one-half times the square of the required width.

[Amend. Coun. J. 11-7-58, p. 8380.]

66-2. All habitable rooms in Residential Units, all sleeping rooms in Institutional Units, and all classrooms or study rooms in Type I schools shall be provided with means of natural lighting complying with the provisions of sections 66-2.1 to 66-2.4, inclusive.

66-2.1. Windows, glazed doors, transoms, skylights, glass block or other devices effectively transmitting light from the outside shall be acceptable means of natural lighting.

66-2.2. (a) The glass area required for natural lighting shall be based on the use of clear glass measured as to the nominal glass dimensions. When a material other than clear glass is used, required areas shall be increased to provide equivalent lighting.

(b) The effective glass area shall be computed at not more than eighty per cent of the actual glass area under the following conditions:

(1) When a required window faces a wall or other obstruction at a distance of less than ten feet.

(2) When a required window is located below a porch roof or other structure projecting more than four feet from the face of the window and when the plane from the head of the window to the outside of such projection forms an angle with the horizontal of less than forty-five degrees.

(c) Enclosed porches shall have a glass area equal to not less than three times the aggregate required glass area opening from a habitable room to the porch.

66-2.3. (a) Residential and Institutional Units. The effective glass area required for natural light in habitable rooms in Residential Units and in sleeping rooms in Institutional Units shall be not less than ten per cent of the floor area of the room nor less than ten square feet, except that when any portion of a room is more than sixteen feet from a window, the effective glass area shall be not less than twelve per cent of the floor area nor twelve square feet.

(b) Type I Schools. The effective glass area in classrooms and study rooms of Type I Schools shall be not less than twenty per cent of the floor area of the room.

66-2.4. The heads of windows required for natural light shall be located as close to the ceiling as practicable and in no case less than six feet six inches from the floor.

66-3. Natural ventilation shall be provided as required by the provisions of sections 66-3.1 to 66-3.3, inclusive.

66-3.1. (a) All habitable rooms in residential unit shall be provided with means of natural ventilation as herein required, except that kitchens having a floor area not exceeding one hundred and twenty-five square feet shall comply with the ventilation requirements for living quarters, kitchens as provided in chapter 81 of this code.

(b) All other rooms, including bathrooms, used or intended for human occupancy, shall be provided with means of natural ventilation as herein required or shall have an approved system of mechanical ventilation complying with the requirements of chapter 81, except as follows:

(1) Natural ventilation shall not be substituted for mechanical ventilation in rooms or spaces where mechanical ventilation is specifically required in chapter 81.

(2) Natural ventilation or mechanical ventilation except where specifically required in chapter 81 shall not be required in spaces occupied for infrequent and limited periods of time such as storage spaces, corridors and other circulation areas.

[Amend. Coun. J. 11-7-58, p. 8380.]

66-3.2. Natural ventilation shall be provided by means of windows, skylights, louvers, monitors, doors or other direct openings to the outside air.

66-3.3. (a) Natural ventilation, when required, shall be provided by means of openings to the outside air having an aggregate clear area of not less than five per cent of the floor area of the room with the following exceptions:

(1) When any portion of the room is more than sixteen feet from a required opening, the aggregate clear area of opening shall be not less than six per cent of the floor area of the room.

(2) When openings for natural ventilation occur on two sides of a room, the aggregate clear area of openings shall be not less than four per cent of the area of the room.

(3) When a required opening faces a wall or other obstruction at a distance of less than ten feet, the effective area shall be computed at not more than eighty per cent of the actual area.

(b) Enclosed porches shall have openings to the outside air of not less than three times the aggregate required area of openings from a habitable room to the porch.

66-4. An alcove opening from a habitable room shall be considered a part of that room and will meet requirements for natural light and ventilation under the following conditions:

(a) The floor area of the alcove shall be not more than fifty per cent of the area of the room.

(b) The area of the opening between the alcove and the room shall be not less than eighty per cent of the vertical plane separating the alcove and the room.

(c) The depth of the alcove measured at right angles to the wall opening shall be not more than one and one-half times the width of the opening.

(d) The glass areas and natural ventilation openings of the room shall be based on the total floor area of the room and the alcove.

66-5. In every building or structure hereafter erected toilet fixtures shall be provided complying with the provisions of sections 66-5.1 to 66-5.10, inclusive.

66-5.1. Except in auxiliary buildings, there shall be not less than one toilet room containing one water closet and one lavatory in every building used for human occupancy. Additional fixtures shall be provided as required in this chapter.

66-5.2. In buildings where both sexes are accommodated, separate toilet room facilities based on the occupancy content of each sex shall be provided, except as follows:

(a) Bathrooms and toilet rooms serving family units or not more than two sleeping room in hotels, dormitories and similar occupancies.

(b) Mercantile or business units shall have a toilet room or rooms within the unit, or access to a public toilet room or rooms within the building. There shall be a separate toilet room or rooms for each sex where the number of persons employed exceeds five.

(c) Toilet rooms serving a single classroom in Type I Schools.
[Amend. Coun. J. 3-14-57, p. 4431.]

66-5.3. Except as otherwise required by sections 66-5.4 and 66-5.6, the minimum number of water closets established in Table 66-5.3 shall be provided in every building.

TABLE 66-5.3. MINIMUM NUMBER OF WATER CLOSETS

Total Number of Persons			
OPEN AIR ASSEMBLY UNITS	Assembly Units (except Schools)	Residential Units Institutional Units Schools	TOTAL REQUIRED NUMBER OF WATER CLOSETS
		Business Units Mercantile Units Industrial Units Storage Units	
1 to 60	1 to 30	1 to 10	1
61 to 120	31 to 60	11 to 25	2
121 to 200	61 to 100	26 to 50	3
201 to 300	101 to 150	51 to 75	4
301 to 400	151 to 200	76 to 100	5
401 to 550	201 to 275	101 to 125	6
551 to 750	276 to 375	126 to 150	7
751 to 1000	376 to 500	151 to 175	8
More than 1000 (a)	More than 500 (b)	More than 175 (c)	

Notes: (a) One water closet shall be added for each 500 persons or fraction thereof in excess of 1,000 persons.

(b) One water closet shall be added for each 200 persons or fraction thereof in excess of 500 persons.

(c) One water closet shall be added for each thirty persons or fraction thereof in excess of 175 persons.

66-5.4. In toilet rooms used exclusively by males, the following percentages of required water closets may be replaced by urinals:

(a) Assembly Units, except Type 1 Schools.....	75%
(b) Assembly Units, Type 1 Schools only	80%
(c) Open Air Assembly Units	75%
(d) Other occupancies	33⅓%

66-5.5. There shall be provided not less than one lavatory for each eight required water closets or urinals. In no case shall there be less than one lavatory per toilet room.

66-5.6. In Mercantile, Industrial and Storage units, plumbing fixture requirements shall be based on number of employees. In other occupancies, plumbing fixture requirements shall be based on the occupancy content of the building as determined by section 48-13.

66-5.7. (a) Residential Units.

(1) Every family unit shall contain not less than one water closet, one lavatory and one tub or shower. Every kitchen shall contain not less than one sink.

(2) In Multiple Dwellings not less than one water closet, one lavatory and one tub or shower shall be provided to serve not more than ten persons.

(b) Institutional Units. In Institutional Units not less than one tub or shower shall be provided for not more than thirty inmates for each sex accommodated.

(c) Type 1 Schools. In Type 1 Schools, required toilet facilities for a classroom having a capacity of not more than forty persons may consist of a toilet room adjacent to and serving such classroom only and containing not less than one water closet and one lavatory.

(d) Drinking Fountains. Drinking fountains shall be provided in the following buildings:

(1) Assembly Units, other than schools and churches, shall be provided with drinking fountains located within a distance of 150 feet and within one story vertically from any part of an assembly room or space, except that indoor stadiums, arenas and similar Assembly Units having a capacity of 5,000 persons or more shall be provided with drinking fountains complying with the requirements for Open Air Assembly Units.

(2) In schools there shall be at least one drinking fountain for each 250 students and at least one such fountain in each story.

(3) Every permanent Open Air Assembly Unit shall be provided with drinking fountains located within 400 feet of any portion of a seating or assembly area.

66-5.8. (a) No drinking fountain shall be located inside a toilet room containing a water closet or urinal.

(b) In Multiple Dwellings and Institutional Units toilet room facilities shall be provided on every floor having sleeping accommodations.

(c) In Assembly Units toilet room facilities shall be provided on each seating level or on a floor immediately above or below such level.

66-5.9. Except in family living units, no bathroom or toilet room shall open directly into room where food is prepared, stored or served without an intervening vestibule. [Amend. Coun. J. 3-14-57, p. 4431.]

66-5.10. Rooms or spaces containing water closets, urinals, bath tubs, or showers shall have floors of non-absorbent materials and shall be entirely separated from other rooms by solid partitions extending from floor to ceiling without openings except as required for access or mechanical ventilation.

CHAPTER 67

EXIT REQUIREMENTS

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67-1. Every building or structure or part thereof, hereafter erected shall comply with the requirements of this chapter pertaining to exits. When there are special requirements as provided in chapters 52 to 61, inclusive, for specific occupancies which differ from the general requirements of this chapter, such special requirements shall take precedence.

67-2. (a) **Exit.** An exit is a means of egress from a building or structure including outside exits, vertical exits, horizontal exits and exit connections as herein defined.

(b) **Vertical Exit.** A vertical exit is a means of exit used for ascension or descension between two or more levels including stairways, smokeproof towers, ramps, escalators and fire escapes.

(c) **Horizontal Exit.** A horizontal exit is a protected opening through or around a fire wall or a bridge connecting two buildings.

(d) **Outside Exit.** An outside exit is an exit from the building to a public way, to an open area leading to a public way, or to an enclosed fire-resistive passage leading to a public way.

(e) **Exit Connections.** Exit connections shall include doorways, aisles, corridors, foyers, lobbies and other horizontal means of exit leading to a vertical exit, a horizontal exit or an outside exit.

- (f) Flight. A series of steps between successive landings or between a landing and a floor.
- (g) Landing. A platform between two flights of stairs.
- (h) Newel Post. An upright post at the end of a stair railing.
- (i) Ramps. An inclined passageway connecting two levels.
- (j) Riser. The vertical distance of a step between two successive treads or between a tread and a landing or floor.
- (k) Stairways. One or more flights of stairs with connecting landings.
 - (1) Enclosed Stairway. A stairway separated by fire-resistive partitions from the rest of the building.
 - (2) Exterior Stairway. A stairway on the outside of a building or structure.
 - (3) Interior Stairway. A stairway within a building or structure.
- (l) Tread. The horizontal distance between two successive risers in a flight.

67-3. All required means of exit shall be continuous means of egress to the outside and shall consist of vertical exits, horizontal exits and outside exits together with the exit connections leading thereto, and shall be arranged, located and constructed as required in this chapter.

67-3.1. Exits from a story above or below grade shall consist of interior stairways except as otherwise required in this section.

(a) Smokeproof Towers. A smokeproof tower may be used in lieu of any required interior stairway. At least one smokeproof tower shall be provided in every building, having a height exceeding 264 feet.

(b) Horizontal Exits. A horizontal exit may be used in lieu of an interior stairway when there is not less than one interior stairway or outside exit in each fire area connected by the horizontal exit.

(c) Escalators. An escalator may be used in lieu of one of three required interior stairways.

(d) Exterior Stairways. Exterior stairways may be used in lieu of not more than 50% of the required interior stairways; provided, however, that the vertical distance from grade to the highest floor served by an exterior stairway shall not exceed thirty feet.

(e) Ramps. Ramps complying with the requirements of section 67-12 may be used in lieu of any required stairway.

(f) Slide pole. Slide poles as permitted by section 67-4. [Amend. Coun. J. 3-18-55, p. 9787.]

67-4. There shall be not less than two exits from every building, floor, space or room, except that one exit shall be permitted under the following conditions:

(a) In all occupancies except Hazardous Use Units, one exit shall be permitted from any room having an area not exceeding 1,200 square feet and designed or used for an occupancy of not more than fifty persons.

(b) In all occupancies one exit shall be permitted from any room or space having an area not exceeding 2,000 square feet and used exclusively for storage purposes with only incidental human occupancy.

(c) In Single-Family Dwellings, one exit shall be permitted from any floor not more than one story above or below grade; provided that the area of such floor shall not exceed 1,500 square feet.

(d) In Multiple Dwellings, one exit serving one family only shall be permitted from the first or second story, and one exit shall be permitted from a basement space provided that the area of such floor or basement shall not exceed 800 square feet.

(e) In Multiple Dwellings, one exit door shall be permitted to a public corridor from a dwelling unit having not more than five habitable rooms and having an area not exceeding 1,000 square feet.

(f) In Multiple Dwellings, two stories high, except in buildings of Type III-C or IV-A or IV-B construction, one inside stairway from the second floor shall be permitted under the following conditions:

(1) The second floor shall have an area not exceeding 4,000 square feet and shall contain not more than four dwelling units.

(2) The stairway and public corridors leading thereto shall be enclosed by walls providing fire resistance of not less than one hour, and all openings in such walls shall be protected with doors having fire resistance not less than a solid wood door one and three-fourths inches thick.

(3) The stairway shall lead directly to an outside exit at grade.

(4) The stairs shall be constructed of non-combustible materials.

(5) The distance to the stairway from the exit door of any dwelling unit shall not exceed twenty feet.

(g) In Multiple Dwellings of Types I-A, I-B and I-C construction not more than four stories high, one stairway shall be permitted under the following conditions:

(1) No floor served by such stairway shall have an area exceeding 4,000 square feet nor shall contain more than four dwelling units.

(2) The stairway shall be enclosed by walls providing fire resistance of not less than two hours, and all openings in such walls shall be protected with self-closing Class B fire doors.

(3) The stairway shall lead directly to an outside exit at grade.

(4) The stairway shall extend to the roof from which there shall be access to an adjoining roof of another building of the same occupancy, height and construction type and having a similar stairway arrangement.

(5) The distance to the stairway from the exit door of any dwelling unit shall not exceed twenty feet.

(h) In Multiple Dwellings and Business Units of Types I-A, I-B or I-C construction not more than eight stories in height, one smokeproof tower shall be permitted under the following conditions:

(1) No floor above the first floor shall have an area exceeding 6,000 square feet nor shall contain more than eight dwelling units.

(2) Public corridors leading to the smokeproof tower shall be enclosed by walls providing fire resistance of not less than two hours, and all openings in such walls shall be protected with Class C fire doors.

(i) In fire stations one inside stairway shall be permitted from the second floor where there are not less than two slide poles in addition thereto.

[Amend. Coun. J. 3-18-55, p. 9787; 12-23-57, p. 7029.]

67-5. The arrangement and location of exits shall comply with the provisions of sections 67-5.1 to 67-5.4, inclusive.

67-5.1. There shall be no obstruction in any exitway that may hamper travel and evacuation.

67-5.2. Where more than one means of exit is required from any room, space or floor of a building, they shall be arranged as remote as practicable from one another.

67-5.3. Vertical exits in Institutional and Assembly Units shall be arranged as to discharge occupants at grade level in the direction of travel to the outside.

67-5.4. Required exits in a building or structure shall provide continuous and uninterrupted means of egress from one story to another and to an outside exit.

67-6. The travel distance to exits shall comply with the provisions of sections 67-6.1 to 67-6.5, inclusive.

67-6.1. Travel distance is defined as the distance from a point in a floor of a building to a vertical exit, a horizontal exit or an outside exit measured along the line of travel, except that in one-story Low or Moderate Hazard Industrial and Storage Units, travel distance may be considered as the distance from any point to an aisle, passageway or other exit connection. [Amend. Coun. J. 3-14-57, p. 4431.]

67-6.2. Travel distance shall be measured from the most remote point in any floor except as follows:

(a) When a floor of a Residential or Business Unit is subdivided and contains a public corridor enclosed by walls providing fire resistance of not less than one hour, travel distance may be measured from a door leading from a room or space to such corridor. In no event, however, shall the travel distance from the most remote point in a floor exceed 150 per cent of the maximum distances required in sections 67-6.3 and 67-6.4.

67-6.3. Except as provided in section 67-6.4, travel distances shall not exceed the following:

Residential Units	100 ft.
Institutional Units	100 ft.
Assembly Units	
grade floors	150 ft.
other floors	100 ft.
Open Air Assembly Units	150 ft.
Business Units	150 ft.
Mercantile Units	150 ft.
Industrial Units	150 ft.
Storage Units	150 ft.
Hazardous Use Units	75 ft.

67-6.4. In a building equipped throughout with an approved system of automatic sprinklers, the maximum travel distance in a Business, Mercantile, Industrial or Storage Unit may be fifty per cent greater than that established in section 67-6.3.

67-6.5. The maximum travel distance to an exit from the end of a corridor shall be not more than fifty per cent of the travel distance permitted in sections 67-6.3 and 67-6.4, except that in Type 1 Schools, such distance shall not exceed twenty feet.

67-7. The width of exits shall comply with the provisions of sections 67-7.1 to 67-7.5, inclusive.

67-7.1. Exit facilities shall be provided for the normal number of persons for which a floor area or part thereof is designed. In no case, however, shall the occupancy content be computed at a rate less than that established in section 48-13.

67-7.2. The unit of exit width, used as a measure of exit capacity, shall be twenty-two inches. Twelve inches clear width added to one or more units shall be considered as one-half unit of exit width.

67-7.3. (a) The width of doors shall be taken as the nominal width of the door leaf. The reduction of clear width of doorway opening resulting from door stops and thickness of door leaf when open shall not exceed two inches for each unit of exit width.

(b) The width of stairs shall be the clear width between walls, railings or newel posts. Handrails may project not more than four inches on each side into the required width. When doors open onto a stair landing, seventy-five per cent of the required exit width shall be maintained beyond the edge of such door when opened in any position.

(c) The width of corridors shall be the clear, unobstructed width. Doors opening into a required exit corridor shall not restrict the required width when opened in any position.

67-7.4. (a) Occupants per Unit Exit Width. The capacity of exits, except in Assembly Units and in Open Air Assembly Units, shall be computed as follows:

(1) Stairs and other vertical exits except smokeproof towers: 40 persons per unit of exit width.

(2) Smokeproof towers: 60 persons per unit of exit width.

(3) Doorways, outside exits, horizontal exits and exit connections: 60 persons per unit of exit width.

(b) Assembly Units. In Assembly Units the capacity of exits shall comply with the requirements of chapter 54.

(c) Open Air Assembly Units. In Open Air Assembly Units the capacity of exits shall comply with the requirements of chapter 55.

(d) Automatic Sprinklers. In buildings equipped throughout with an approved system of automatic sprinklers, the capacity of exits as established in this section may be increased fifty per cent.

(e) Vertical Exits. The total width of vertical exits at any point shall be based on the requirements of the floor having the largest occupancy content which is served by such vertical exits. The required width of vertical exits serving more than one floor shall not be cumulative except as required by the provisions of chapter 54 for Assembly Units and chapter 55 for Open Air Assembly Units. Under no circumstances shall stairways decrease in width in the line of travel.

(f) Grade Floor Exits. The width of outside exits at grade shall be determined by the required width of vertical exits discharging on the grade floor plus the exit width required for the grade floor occupancy content.

(g) Mezzanine Floors. The occupancy content of a floor shall include the occupancy content of all mezzanine floors discharging thereon.

67-7.5. The width of required exits shall comply with the requirements of section 67-7.4 as to capacity, but in no case shall such width be less than the minimum widths required in this section.

(a) Doors. All doors required as exits shall be not less than thirty-six inches wide with the following exceptions:

(1) In all occupancies, exit doors from rooms or spaces having a capacity not exceeding twenty persons shall be not less than twenty-eight inches in width.

(2) In Residential Units, exit doors serving only one dwelling unit shall be not less than thirty-two inches in width.

(3) In Institutional Units, exit doors from rooms and spaces serving bed-ridden patients shall be not less than forty-four inches in width.

(b) Stairs and Corridors. All stairs and corridors required as exits shall be not less than forty-four inches in width with the following exceptions:

(1) In all occupancies, stairs and corridors serving not more than forty persons per story shall be not less than thirty-six inches in width.

(2) In Residential Units, stairs and corridors serving only one dwelling unit shall be not less than thirty-six inches in width.

(3) In Residential Units, basement stairs serving only one dwelling unit shall be not less than thirty inches in width.

(4) In Institutional Units, corridors required as exits for patients shall be not less than sixty inches in width.

(5) In Type 1 Schools, corridors required as exits from classrooms, study rooms or assembly rooms shall be not less than sixty inches in width.

67-8. (a) All outside exits at grade floor level shall lead to a public way directly or by way of a yard, court or fire-resistive passageway enclosed with walls, floors and ceiling providing fire resistance of not less than two hours. The width of such yards, courts or passageways shall be not less than the width of any exit leading thereto. When a yard, court or passageway serves more than one exit, the width shall be increased cumulatively in the direction of exit travel.

(b) Where the grade floor is not more than six feet above the ground level outside the building, access from an outside exit to a public way, yard or court may be by way of an outside platform having a dimension in the direction of travel of not less than four feet and connecting to grade level with outside steps having treads, risers and railings, required in section 67-10. In determining

requirements for outside exits, terraces extending not less than twenty feet from a building wall may be considered as constituting grade.

67-9. All doors required as a means of exit shall comply with the provisions of sections 67-9.1 to 69-9.3, inclusive.

67-9.1. All doors required as exit doors shall swing in the direction of exit travel with the following exceptions:

(a) In Residential Units, doors serving one dwelling unit.

(b) In Residential, Business and Mercantile Units, outside exit doors serving not more than fifty persons.

(c) In Type 1 Schools, doors to corridors from classrooms having a capacity not exceeding fifty persons, provided that there are direct exits to the outside from such classrooms.

(d) In Business Units, doors to corridors from offices having a capacity not exceeding 100 persons.

(e) In all other occupancies, except Hazardous Use Units, doors to corridors from rooms having a capacity not exceeding fifty persons.

Doors, when open, shall not project into a public way.

67-9.2. (a) All doors used in connection with exits shall be so arranged as to be readily opened without the use of a key from the side from which egress is made.

(b) In Assembly Units, exit doors serving more than 200 persons shall be equipped with approved latches or bolts which release under a pressure of fifteen pounds.

(c) In rooms of Institutional Units used as jails or similar places of detention for more than ten persons, approved releasing devices with remote control shall be provided for emergency use.

67-9.3. Revolving doors may be used as required exits in Residential, Business and Mercantile Units under the following conditions:

(a) Revolving doors shall be of an approved type.

(b) Revolving doors shall be used only as outside exits at grades.

(c) Revolving doors shall constitute not more than fifty per cent of required outside exits.

67-10. All stairways required as exits shall comply with the provisions of sections 67-10.1 to 67-10.6, inclusive.

67-10.1. (a) In Institutional and Assembly Units the maximum height of a riser shall be seven and one-half inches and the minimum width of a tread, exclusive of nosing, shall be ten inches.

(b) In other occupancies the maximum height of a riser shall be eight inches, and the minimum width of a tread, exclusive of nosing, shall be nine inches. The width of a tread, including nosing, shall be not less than ten inches.

(c) The height of two risers plus the width of one tread shall equal not less than twenty-four inches nor more than twenty-seven inches.

(d) Winders shall not be permitted in stairs required as exits except in Single-Family and Two-Family Dwellings. The width of a tread of a winder measured at a distance of eighteen inches from the inside railing shall be not less than nine inches nor less than the treads of the flight below or above the winding section.

67-10.2. (a) The maximum vertical rise of a flight between floors, between landings or between a floor and a landing shall not exceed nine feet in Assembly Units nor twelve feet in all other occupancies.

(b) The length of a landing in the direction of travel shall be not less than the width of the stairs, but need not exceed four feet in a stair of any width.

(c) Except in Single-Family and Two-Family Dwellings, no flight shall have less than two risers.

67-10.3. (a) All stairways shall have walls, railings or guards on both sides and shall have handrails on both sides except as follows:

(1) Stairs less than forty-four inches wide may have a handrail on one side only.

(2) Intermediate handrails, continuous between landings, shall be provided where required to provide a lateral distance between handrails not exceeding eighty-eight inches.

(b) In Assembly Units every handrail mounted on a wall shall have its ends returned and joined to the wall.

67-10.4. Stairs, other than those in Single-Family and Two-Family Dwellings or serving only one dwelling unit in a Multiple Dwelling, shall comply with the following construction requirements:

(a) Stairs shall be constructed entirely of non-combustible materials in the following buildings:

(1) Buildings of Types I-A, I-B, I-C and II construction.

(2) Buildings of Institutional and Assembly Units except Churches.

(3) Buildings of all occupancies four stories or more in height or having an occupancy content of more than forty persons above or below the grade floor level.

(b) The under side of stairways of combustible construction shall be protected to provide fire resistance of not less than one hour.

(c) Stairs shall be constructed with solid risers, treads and platforms except that open risers may be used for stairways constructed of non-combustible materials serving as exits from boiler rooms and other mechanical equipment areas.

(d) The finished surface of treads and landings shall be of materials which will not cause danger of slipping.

(e) No closet or storage space shall be located beneath stairs.

67-10.5. Enclosures of stairways shall comply with the requirements of section 62-3.2.

67-10.6. In Residential Units, stairways serving not more than two dwelling units shall have a clear headroom of not less than six feet eight inches. In all other occupancies the clear head room shall be not less than seven feet.

67-11. A smokeproof tower shall consist of an enclosed stairway accessible only from a vestibule or balcony having openings to the outside or to an interior smoke shaft as hereinafter provided. Smokeproof towers shall conform to all applicable requirements for interior stairs and with the provisions of sections 67-11.1 to 67-11.6, inclusive.

67-11.1. (a) Stairways shall be constructed entirely of non-combustible materials and shall be enclosed by walls providing fire resistance of not less than three hours.

(b) There shall be no openings in walls separating the enclosure from the interior of the building. Openings in an exterior wall of the enclosure shall be permitted only when such openings are located not less than thirty feet from any opening in the walls of the same building or an adjacent building. Such openings in an exterior wall shall be protected by fixed or automatic fire windows or shutters.

(c) The bottom of an enclosure and the top of an enclosure shall be of construction providing fire resistance of not less than three hours.

67-11.2. Access to the stairway at each story shall be through a vestibule or balcony complying with the following requirements:

(a) Except when an interior smoke shaft is provided, the vestibule or balcony shall be located on an exterior wall not subject to a severe fire exposure hazard.

(b) Every vestibule or balcony shall have an opening to a public way, yard or court or to an interior smoke shaft complying with the requirements of section 67-11.6.

(c) Such openings shall have an area not less than one-half the area of the exit doors leading from the buildings to the vestibule or balcony and shall be located not less than four feet above the floor and not more than six inches below the ceiling of the vestibule or balcony. Unless such opening faces a public way, yard or court not less than forty feet wide, the opening shall be protected with a fire shield complying with the requirements of section 67-11.3. In any case, the yard or court shall have a minimum width of twenty feet and a minimum area of 400 square feet.

(d) The floors, walls and ceilings of all vestibules or balconies shall be of construction providing fire protection of not less than three hours.

(e) When openings are protected by fire shields, the level of the vestibule or balcony floor shall be at the level of the floor of the building which it serves or shall be accessible therefrom by ramps having a grade of not more than one in ten. When openings are not protected by fire shields, the vestibule or balcony floor shall be so placed as to prevent the possibility of blocking the doors by snow or ice but shall be not more than seven and one-half inches below the level of any story. In no case shall there be any step from the vestibule or the balcony to the stair enclosure.

67-11.3. When fire shields are provided to protect exterior openings of balconies or vestibules, such fire shields shall comply with the requirements of this section.

(a) Fire shields shall comply with all applicable requirements for fire windows as provided in section 65-6.

(b) Fire shields shall have an opening sash having a clear area not less than as required in section 67-11.2(c), arranged to open automatically in case of fire to the full limit and to be held securely in such open position. Provision shall be made for the manual opening or closing of the sash.

(c) The automatic opening of the sash shall be actuated by approved devices located inside the building within five feet of the door from the building to the vestibule or balcony and located also on the ceiling of the vestibule or balcony. Such devices shall be designed to operate as a result of rate of temperature rise or when the surrounding air reaches a temperature of 120 degrees Fahrenheit.

67-11.4. (a) The openings from the building to the vestibule or balcony and from the vestibule or balcony to the stairway enclosure shall be protected with self-closing class B fire doors.

(b) All windows of the building or structure facing on a yard or court within thirty feet of the vestibule or balcony shall be protected with class E fire doors, fire windows, fire shutters or other approved opening protectives complying with the requirements of section 62-2.4.

67-11.5. The smokeproof tower shall terminate at grade level and shall have access directly to a public way, to an open area leading to a public way, or to an exit corridor leading to a public way which is enclosed with construction providing fire resistance as required for the stairway enclosure.

67-11.6. Every interior smoke shaft used in connection with an entrance vestibule or balcony of a smokeproof tower shall be at least five feet wide at every point and shall be open and unobstructed over an area of not less than

fifty square feet from its bottom to the sky; provided, however, that such shaft may be covered with a roof if the walls below such roof are open to the outside air on all sides with a total open area of not less than 100 square feet. The smoke shaft shall be separated from all other parts of the building by construction providing fire resistance of not less than four hours. There shall be no openings from the building into the smoke shaft except the required openings from the vestibules or balconies.

67-12. Ramps required as a means of exit shall comply with all applicable requirements for interior stairs and with the provisions of sections 67-12.1 to 67-12.3, inclusive.

67-12.1. Ramps used in lieu of stairs shall have a grade of not more than one in eight.

67-12.2. Ramps having a grade greater than one in ten shall have hand-rails as required for stairs.

67-12.3. Every ramp having a grade more than one in twelve shall have a non-slip surface.

67-13. Horizontal exits shall consist of doorways through a fire wall or bridges or balconies connecting to other buildings or separate fire areas of the same building complying with the provisions of sections 67-13.1 to 67-13.3, inclusive.

67-13.1. The floor area on either side of a horizontal exit shall be sufficient to accommodate the occupants of both floor areas served, based on not less than three square feet per person.

67-13.2. (a) Doors shall comply with all requirements for doors to stair enclosures except that when opening through a fire wall they shall provide fire resistance for such openings as required in section 62-1.

(b) Doors shall swing in the direction of the required exit travel.

67-13.3. (a) Bridges and balconies shall be constructed of non-combustible materials with solid floors. Railings shall comply with the requirements for railings of outside stairs.

(b) All exterior wall openings within a distance of fifteen feet from balconies or bridges shall be protected by fire doors, fire windows or fire shutters as required in section 62-2.

67-14. Escalators serving as a required means of exit shall comply with the requirements of chapter 79 and with the requirements of sections 67-14.1 to 67-14.5, inclusive.

67-14.1. Escalators shall comply with all applicable requirements of interior stairways as provided in section 67-10.

67-14.2. Escalators shall be of the horizontal tread type operating in the direction of travel.

67-14.3. An escalator flight shall have a vertical travel of not more than thirty-five feet.

67-14.4. The angle of inclination of an escalator shall not exceed thirty degrees from the horizontal.

67-14.5. Escalators serving as required exits shall be enclosed and protected as required for stairways in section 62-3.

67-15. Exterior stairs required as a means of exit shall comply with all applicable requirements for interior stairs and with the provisions of sections 67-15.1 to 67-15.4, inclusive.

67-15.1. Solid risers shall not be required. Treads and landings shall be solid except for openings required for drainage.

67-15.2. Except in Residential Units, all openings within fifteen feet of an exterior stair shall be protected with fire doors, windows or shutters complying with the requirements of section 62-2.

67-15.3. Exterior stairs shall be built permanently to the ground without counter-balanced or movable sections.

67-15.4. Exterior stairs shall be constructed entirely of non-combustible materials in the following buildings:

- (a) Buildings of Types I-A, I-B, I-C and II construction.
- (b) Institutional Units.

67-16. Fire escapes, when permitted, shall comply with the provisions of sections 67-16.1 and 67-16.2.

Fire escapes shall not be permitted except where such exits now serve existing buildings and except as approved by the commissioner of buildings for existing buildings where additional exits are necessary and conditions do not permit the use of more adequate exit facilities.

67-16.1. Fire escape stairways shall conform, insofar as possible, with the requirements for interior stairways in section 67-10, except as otherwise required in this section.

(a) The width of a fire escape stairway shall be not less than twenty-four inches. The maximum riser shall be eight inches, and the minimum width of tread, exclusive of nosing, shall be nine inches.

(b) *Location.*

(1) Every fire escape stairway shall be located outside the building on a wall facing a public way or an open space having an unobstructed exit to a public way at grade.

(c) *Counter-balanced Sections.* A counter-balanced section may be used for the bottom flight of any fire escape stairway and shall be used when such fire escape stairway projects over a public way. The vertical height of a counter-balanced section shall not exceed fourteen feet and have a minimum of twelve feet except when a counter-balanced section is used over any public way where the loading, unloading or passage of trucks or large semi-trailers is necessary, the minimum height shall be not less than fourteen feet.

(d) Access to a fire escape stairway from the interior of a building shall be through a doorway flush with the floor and not less than thirty inches wide, except that access to a fire escape stairway serving not more than twenty persons may be through a window having an openable area not less than thirty inches wide by thirty-six inches high, located not more than twenty-four inches above the floor.

(e) *Construction.*

(1) Fire escape stairways shall be constructed entirely of non-combustible materials.

(2) Fire escape stairways shall be designed to support a live load of not less than one hundred pounds per square foot.

(3) Stair treads and landings shall be so constructed as to prevent accumulation of snow or ice, but the maximum dimension of any opening through such treads, landings or floors shall not exceed one and one-fourth inches.

(4) Metal mesh or guard rails not less than forty-two inches high shall be provided on all unenclosed sides of fire escape stairways.

(5) All metal structural members shall be adequately protected against corrosion and shall be scraped and painted at least once every three years.

(f) *Protection.* All exterior wall openings within ten feet of a fire escape stairway shall be protected as provided in section 62-2.

[Amended Coun. J. 5-28-58, p. 7799.]

67-16.2. Other means of fire escape exit, including ladders or other devices, shall comply with such requirements as the commissioner of buildings shall prescribe. All metal structural members shall be adequately protected against corrosion and shall be scraped and painted at least once every three years. [Amend. Coun. J. 5-28-58, p. 7799.]

67-17. All exit areas shall be adequately lighted by electricity. Except in single-family and two-family dwellings, such lighting shall be continuous during the time that conditions of occupancy require that the exit ways be open or available and the intensity of lighting required in section 67-17.1 is not provided by means of natural light.

67-17.1. Normal intensity of lighting shall be not less than one foot candle per square foot on the floor surfaces of vertical exits and not less than one-half foot candle per square foot on the floors of other exits.

67-17.2. Lighting on the floor of exit aisles in places of assembly, where theatrical, motion picture or other use requires darkened conditions, may be reduced to not less than one-tenth candle per square foot during the time of performance.

67-17.3. Emergency lighting shall be provided in accordance with the requirements of chapter 88 of this code.

67-18. Exit, stairway, fire escape and directional signs, illuminated by electricity, shall be installed and maintained in all existing buildings and buildings hereafter erected, altered or converted, in accordance with the provisions of sections 67-18.1 to 67-18.7.

67-18.1. Exit, stairway, fire escape and directional signs shall be installed to mark all ways of egress in the following buildings:

- (a) Multiple dwellings of the corridor type two stories or more in height.
- (b) Institutional buildings two stories or more in height.
- (c) Assembly units.
- (d) Schools.

(e) Open air assembly units with a capacity exceeding 250 persons where such unit is used at any time when natural light does not clearly indicate all means of egress.

(f) Business units, mercantile units, industrial units, storage units, and hazardous use units over two stories in height; business units, mercantile units, industrial units, storage units and hazardous use units two stories or less in height having a ground area of ten thousand square feet or more.

(g) Theatres.

(h) Churches.

[Amend. Coun. J. 1-20-50, p. 5759; 5-24-51, p. 318.]

67-18.2. Every such sign shall consist of a flat sided glass globe, a rectangular 20 U. S. gauge sheet metal box provided with channels to hold a glass sign or a plastic edge glow type of sign, bearing the lettering hereinafter required. [Amend. Coun. J. 1-20-50, p. 5759; 12-22-53, p. 6556.]

67-18.3. Every such sign shall be internally illuminated by a ten watt or larger incandescent electric lamp.

67-18.4. Exit signs shall be located over or immediately adjoining every opening to a horizontal means of egress or ramp leading out of a building; also over every opening leading from a public assembly room to a mezzanine floor, corridor or hallway.

Stairway or exit signs shall be located at every stairway on every floor in existing buildings. In buildings hereafter erected stairway signs only shall be located at every stairway on every floor.

Fire escape signs shall be located over or immediately adjoining every doorway or opening to a fire escape.

All such signs shall be clearly visible from all means of approach to such ways of egress.

Directional signs shall be located where the path of exit travel or the location of the exit, stairway or fire escape is not clear and unmistakable due to bridges, tunnels, intersections of hallways, intervening partitions or turns in corridors. Such signs shall be located at every yard, court, passageway or other exterior space leading from any exit to a space serving as a way of departure from every theatre, public assembly building, hotel, school or church. [Amend. Coun. J. 1-20-50, p. 5759.]

67-18.5. Every exit, stairway and fire escape sign shall bear the words "EXIT", "STAIRWAY" and "FIRE ESCAPE", respectively, in block letters at least $4\frac{1}{2}$ inches high with $\frac{9}{16}$ inch stroke.

Every directional sign shall bear the word "EXIT" to indicate the direction of an exit, stairway or fire escape and shall bear a horizontal arrow pointed in the direction of travel. Lettering shall be in block letters at least $3\frac{3}{8}$ inches high with $\frac{9}{16}$ inch stroke. The arrow shall be $\frac{1}{2}$ inch wide and as long as the lettering.

All such letters and arrows shall be red on a white translucent field. [Amend. Coun. J. 1-20-50, p. 5759.]

67-18.6. Exit, stairway, fire escape and directional signs of luminous phosphorescent material illuminated as hereinbefore required may be used in lieu of requirements of system II and III, as defined in sections 88-72 and 88-73 of this code, in all existing buildings and in buildings hereafter erected, altered, or converted, in accordance with section 88-78 of this code.

Phosphorescent signs shall be made of materials which meet or exceed the specifications for luminous material and equipment (non-radioactive), electric lamp activated as hereinafter in this section set forth. No such sign shall be installed or used until it has been tested as hereinafter specified in section 67-18.65 by a laboratory equipped to make such tests and maintained by the city of Chicago as a testing laboratory or by any other qualified laboratory equipped to make such tests as herein provided and acceptable to and approved by the fire commissioner of the city of Chicago and until such laboratory has certified to the fire commissioner that such sign meets the requirements as set forth in section 67-18.65, upon which certification the fire commissioner shall approve such sign for installation subject to further inspection as hereinafter provided.

No person shall sell or offer for sale, install or use any such phosphorescent sign until it has been approved by the commissioner as aforesaid. [Amend. Coun. J. 5-24-51, p. 318.]

67-18.7. Normal illumination is hereby defined as that intensity of illumination which provides not less than one foot candle at all points on stairways, floors and paths of travel required to be illuminated by the provisions of this code.

67-18.8. The provisions of sections 67-18.1 to 67-18.7 shall be enforced by the bureau of fire prevention.

67-18.65. A. Classification.

A-1. Form. Non-radioactive luminous-material shall be furnished in the following forms:

Applied material (luminescent material with backing).

B. Material and Workmanship.

B-1. Material. All material shall be of the highest grade and free from any imperfections which may effect its serviceability under the most severe conditions.

B-2. Workmanship. The workmanship shall be first class in every respect.

C. General Requirements.

C-1. Definitions.

C-1a. *Luminescent material.* Luminescent material is that material which emits light not ascribable directly to incandescence and which is emitted without elevation in the temperature of the material.

C-1b. *Phosphorescent material.* Phosphorescent material is identified as that material which, after exposure to a light source, either visible or invisible, will continue to emit light in the visible spectral range for an appreciable period of time after excitation of the material has ceased.

C-1c. *Microlumen.* A microlumen is the total visible energy received by a square centimeter of surface when illuminated by a point source of unit candle power placed at a distance of 10 meters.

C-1d. *Microlambert.* A microlambert is the unit of brightness used in this specification. It is the brightness of a perfectly diffusing and completely reflecting surface illuminated by 1 microlumen per square centimeter of surface.

C-2. *Shape and size of markings.* When markings are required for reporting certain characteristics or descriptive information, the characters shall be of such shape and size as to insure their legibility for the intended applications.

D. Detail Requirements. Phosphorescent materials.

D-1. *Initial brightness.* One minute after a 5-minute exposure to a tungsten incandescent light source providing 600 foot-candles uniformly on a smooth surface, to which three coats of the phosphorescent material have been applied, the material shall have a brightness of not less than 35 microlamberts.

D-2. *Rate of decay.* Thirty minutes after removal of the light source described in paragraph D-1, the brightness shall be not less than 1.5 microlambert. One hour after removal of the light source, the brightness shall be not less than 0.5 microlambert.

D-3. *End brightness.* Three hours after removal of the light source, described in paragraph D-1, the brightness shall be not less than 0.20 microlambert.

D-4. *Weathering.* The material shall not show a reduction in brightness greater than 30 percent of the brightness values required by paragraphs D-1, D-2 and D-3 following 90 hours exposure in the salt-spray chamber described in paragraph E-2b (2) a. None of the phosphorescent material shall show a tendency to peel, chip, discolor, or flake during this period.

D-1a. *Applied material (phosphorescent material with backing).*—

D-1a. (1) *General.* The material shall meet the requirements of paragraph D-1, except as to number of coats, accessory equipment, drying, time, primer and hiding power.

D-1a. (2) *Backing.* The back material shall be of sufficient stiffness, thickness, and strength to retain its shape without bending or folding, regardless of the method of mounting. Material which tends to curl shall not be used. The backing material shall have a minimum useful life equal to or greater than that of the nonradioactive luminous material applied to its surface. It shall be moisture-resisting, and shall be capable of resisting acid fumes and high humidity atmospheric conditions at temperatures up to 65° C. (149° F.). The backing used shall be suitable for outdoor use. After the weathering tests described in paragraph E-2b (2)a, the backing shall remain in a serviceable condition and shall show no signs of cracking, peeling or discoloring of the luminous coating from the backing.

1. Method of Sampling, Inspection, and Tests.

E-1. *General.* The methods of sampling, inspection and tests conducted upon non-radioactive luminous material, covered by this specification, shall be considered as falling in the following general classifications:

Type or brand approval tests. (At designated laboratory).

Inspection tests. (At place of manufacture).

E-2. *Type or brand approval tests.* The type or brand approval tests shall comprise all those tests necessary to determine that the material is in strict accordance with the requirements of this specification.

E-2a. Nature of Tests.—

E-2a. (1). *Brightness.* Brightness tests shall be conducted on the material for the purpose of determining the discharge characteristic and to determine the period of useful life. Intensity of brightness shall be measured in accordance with the brightness requirements of paragraphs D-1 and D-2 to determine the characteristics of the material as received and after the weathering tests. (See par. E-2b (2)).

E-2a (2). *Weathering.* Weathering tests shall consist of a determination of the ability of the material to withstand an accelerated weathering condition which includes the simulated action of sunlight, rain, and fog. (See Par. E-2b)).

E-2b. Methods of Test.—

E-2b. (1). *Brightness.* The brightness of luminescent materials covered by this specification shall be determined by the visual comparison method. This method consists of matching the brightness of a diffusely illuminated field of known brightness with the brightness of the surface under test, the brightness of the diffuse field being capable of being varied at will. The brightness of the diffuse field shall be determined by preliminary calibration against known primary standards of brightness. Thus, by comparing the brightness of the working standard with the brightness of the surface under test, its value in microlamberts can be determined. For the measurement of brightness of 1.5 microlambert or above, a MacBeth illuminometer or other suitable photometer, fitted with an optical filter of the proper color and density to match the color of luminescent radiation, shall be used. For lower brightness, the instrument described in paragraph E-2b (1)a shall be used.

E-2b (1)a. Measurement of brightness of phosphorescence.

Test equipment:

MacBeth illuminometer or other suitable photometer. 1000-watt tungsten projector lamp operating at rated voltage of 110 volts. The lamp need not be new but should be capable of furnishing 600 foot-candles at a distance of $1\frac{1}{2}$ feet.

Test Specimens:

In applied form shall have an area of at least one square foot.

Test procedure:

After having been kept in darkness for a period of 24 hours prior to test, the test specimen shall be irradiated by 500 foot-candles of tungsten illumination for a period of 1 minute. After irradiation, brightness readings shall be taken 1 minute after exposure and thereafter at the end of approximately 5, 10, 30, 60, 120, 180 minutes, etc., after exposure. Readings shall be taken by an observer whose eyes have been dark-adapted for a period of at least 20 minutes.

Low brightness measurements:

The photometer shall be used for brightness measurements below 1.5 microlambert. In this instrument the photometric field is approximately $2\frac{1}{2}$ inches in diameter and is observed with binocular vision. The photometer shall be calibrated by placing a diffusing surface of known reflection power and illuminating it to a known brightness by varying the distance from a source of the desired color. The brightness of the source shall be determined close to the source of high levels of illumination by standard methods of photometry. The results obtained from a series of measurements of brightness of phosphorescent decay shall be plotted.

E-2b (2). Weathering tests.**E-2b (2)a. Weathering of phosphorescent material.**

Test equipment:

A salt-spray chamber containing a sunlamp and "Corex window" assembly, equipped with a new S-1 bulb for each 22 cycle test.

A pump for forcing a stream of water against a rapidly rotating disk within the chamber.

A salt dissolver.

A motor-driven blower for forcing heated air into the chamber.

Test procedure:

The spray is produced when a stream of water strikes the rotating disk. The

"Corex" window shall be located directly above the disk so that the spray will wash the window and prevent the accumulation of salt due to evaporation of water caused by the head of the sunlamp. The specimen shall be mounted inside the chamber so that the plane of the specimen is 12 inches from the bottom of the bulb. The specimen shall then be subjected to a cycle of 10 minutes spray of 5 percent salt solution and then a 10-minute blast of air at 140° F. These conditions shall alternate for 10-minute intervals over the required test period. During the test period the samples shall be continuously irradiated with ultra-violet light from the S-1 sunlamp.

E-3. *Inspection tests (at place of manufacture).* Inspection tests at place of manufacture shall consist of selecting test samples and forwarding them to a designated approved laboratory for weathering the brightness tests.

<i>Form in which supplies:</i>	<i>Quantity for Test.</i>
Applied material.....	1 square foot of each color.

E-4. *Inspection tests (at designated laboratory).* Inspection tests at designated laboratory shall be conducted to determine whether the material is identical with that which was initially given type or brand approval test and approved. [Amend. Coun. J. 5-24-51, p. 318.]

CHAPTER 68

MINIMUM DESIGN LOADS

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		68- 5.2.	Floors
		68- 6.	Other loads

68-1. Buildings or other structures hereafter erected shall be designed and constructed to support safely the minimum design loads, including dead loads as required in this section, without exceeding the allowable stresses required in this code for the materials of construction in the structural members.

68-2. Design floor loads shall be determined by the provisions of sections 68-2.1 to 68-2.8, inclusive.

68-2.1. The live loads assumed for purposes of design shall be the greatest combination loads that it is estimated will be produced by the intended occupancies or uses; provided that the live loads to be considered as uniformly distributed shall be not less than the values established in Table 68-2.1, with reductions as permitted in section 68-2.2.

TABLE 68-2.1. MINIMUM UNIFORMLY DISTRIBUTED FLOOR LIVE LOADS.

<i>Occupancy</i>	<i>Minimum Live Loads (Lbs. per sq. ft.)</i>
A—Residential Units	
(a) Dwelling units or sleeping rooms.....	40
(b) Public Rooms	100
(c) Public Kitchens	75
(d) Corridors	
(1) Serving dwelling units and sleeping rooms only.....	40
(2) Other	75
(e) Public Stairways	75
B—Institutional Units	
(a) Operating Rooms, private rooms and wards.....	40
(b) Kitchens	75
(c) Public spaces	75
(d) Corridors and stairways	75
C-1—Large Assembly Units and C-2—Small Assembly Units	
(a) Auditoriums, theaters and assembly halls	
(1) Fixed seats	60
(2) Movable seats	100
(3) Projection room	100
(4) Stage floor	150

(5) Dressing rooms	40
(6) Gridiron floor grating	60
(b) Armories	150
(c) Courtrooms	75
(d) Dance halls, gymnasiums and dining rooms.....	100
(e) Libraries	60
(f) Kitchens	75
(g) Aisles, corridors, lobbies, stairways and other public space.....	100
C-3—Schools.	
(a) Classrooms	40
(b) Laboratories	75
(c) Shops	100
(d) Corridors and stairways	100
D—Open Air Assembly Units	
All structures	100
E—Business Units	
(a) Offices	50
(b) Lobbies	100
(c) Laboratories	100
(d) Public rooms	100
(e) Corridors and stairways	75
F—Mercantile Units	
All structures	100
G—Industrial Units	
All structures	100
H—Storage Units	
(a) Garages and parking facilities for passenger cars only	
(1) First floor	100
(2) Floors above first floor	50
(3) Roof deck when used for parking.....	75
(b) All other structures	100
I—Hazardous Use Units	
All structures	100
[Amend. Coun. J. 5-28-58, p. 7797.]	

68-2.2. (a) Permitted Live Load Reductions. Except as provided in paragraph 68-2.2. (b), the design live loads may be reduced as follows:

(1) Columns, Walls and Piers. Columns, walls and piers shall be designed to carry not less than the following percentage of live floor loads of all floors above.

<i>Number of Floors Supported.</i>	<i>Percentage of Live Loads.</i>
1 floor	85%
2 floors	80%
3 floors	75%
4 floors	70%
5 floors	65%
6 floors	60%
7 floors	55%
8 or more floors	50%

No reduction of roof loads shall be permitted.

(2) Foundations. Foundations shall be designed for the same percentage of live loads as required for the column, pier or wall bearing thereon.

(3) Beams, Girders and Trusses. Beams, girders and trusses shall be designed to carry not less than the following percentage of live floor loads

established in section 68-2.1 based on the tributary floor area carried by the members.

<i>Tributary Floor Area</i>	<i>Percentage of Live Loads.</i>
Not more than 100	100%
More than 100 sq. ft. and not more than 200 sq. ft.	95%
More than 200 sq. ft. and not more than 300 sq. ft.	90%
More than 300 sq. ft.	85%

No reduction of roof loads shall be permitted.

(4) Loads. When the dead load exceeds the live load, the live loads specified in section 68-2.1 may be reduced to a load obtained by multiplying by the ratio of the specified live load to the dead load, but the live load so computed shall in no case be less than two-thirds of the live load as specified in section 68-2.1. These reduced live loads are subject to all other provisions in chapter 68. This reduction in live load will not apply to ultimate strength method in concrete design.

(b) Exceptions to Live Load Reductions.

(1) Storage Uses. In rooms or spaces designed or used for storage purposes, the reduction of live loads shall not exceed one-half of the percentage reductions provided in paragraph 68-2.2. (a).

[Amend. Coun. J. 1-20-50, p. 5758; 6-25-58, p. 7911.]

68-2.3. In the design of floors, consideration shall be given to the effects of known or probable concentrations of load to which they may be subjected. Floors shall be designed to carry the specified uniformly distributed loads or the following minimum concentrated loads, whichever may produce the greater stresses. The indicated concentrations shall be assumed to occupy areas two and one-half feet square and to be so placed as to produce maximum stresses in the affected members.

<i>Floor Space.</i>	<i>Load.</i>
Office floors	2,000 lbs.
Garages and parking facilities for passenger automobiles	2,000 lbs.
Garages for busses and trucks.....(Not less than actual rear wheel load when fully loaded.)	

All trusses over garage floors shall be designed to support a concentrated load of not less than 2,000 lbs. suspended from any one panel point of the lower chord.
[Amend. Coun. J. 5-28-58, p. 7797.]

68-2.4. Driveways, sidewalks, spaces for storage of loaded or unloaded trucks or busses, and spaces to be occupied by tanks, tracks, or other special equipment shall be designed for the actual weight of the superimposed loads.

68-2.5. The live loads required in this chapter may be assumed to include a sufficient allowance to cover the effects of ordinary impact. For special occupancies and loads involving unusual impacts, such as those resulting from moving machinery, elevators, cranes, vehicles, etc., provision shall be made by a suitable increase in the assumed live load.

68-2.6. When the construction is such that the structural elements thereof act together as an elastic frame due to their continuity and the rigidity of the connections, the effect of such partial loading as will produce maximum stress in any member shall be provided for in the design.

68-2.7. In office buildings or similar structures in which subdividing partitions may be erected, rearranged or relocated, the dead load of such partitions shall be assumed at not less than twenty pounds per square foot of floor area.

68-2.8. (a) In every building or other structure, or part thereof, used for mercantile, industrial or storage purposes, the loads approved by the commissioner of buildings shall be marked on placards of approved design which shall be supplied and securely affixed by the owner of the building, or his duly authorized agent, in a conspicuous place in each space to which they relate, provided, however, that such posting of floor loads shall not be required in buildings or portions thereof used exclusively for the production and distribution of electricity, gas or steam. Application of such placard shall be accompanied by a certification from a licensed architect or registered structural engineer that he personally inspected the building and that he computed the safe load in conformity

with the provisions of this ordinance. Duplicate placards may be issued to replace lost or destroyed placards where the building department has records of the safe floor load limits of the particular building without such certification upon payment of a fee in accordance with section 43-33 of this code.

(b) Spaces in garages and parking facilities designed for the use of passenger automobiles only shall be placarded as follows: "This floor to be used for the storage of passenger automobiles only." [Amend. Coun. J. 1-20-50, p. 5758; 5-28-58, p. 7797; 11-7-58, p. 8380.]

68-3. Design roof loads shall be determined by the provisions of sections 68-3.1 and 68-3.2.

68-3.1. Roofs having a pitch of less than thirty degrees shall be designed for a live load normal to the roof surface (including snow load) of twenty-five pounds per square foot of roof area. Such live load may be neglected in the design of roofs having a pitch of thirty degrees or more, which shall be designed for wind pressures as required in section 68-4.3.

68-3.2. Roofs used for terraces, promenades or similar uses shall be designed for a minimum live load of sixty pounds per square foot. Roofs to be used for other special purposes shall be designed for appropriate live loads as approved by the commissioner of buildings.

68-4. Wind loads shall be determined by the provisions of sections 68-4.1 to 68-4.10, inclusive.

68-4.1. Buildings or other structures shall be designed and constructed to withstand the horizontal pressures established in Table 68-4.1, allowing for wind for any direction. The height is to be measured above the average level of the ground adjacent to the building or structure.

TABLE 68-4.1. MINIMUM DESIGN WIND PRESSURES FOR BUILDINGS AND OTHER STRUCTURES.

	<i>Height Zone (feet)</i>	<i>Wind Pressure (lbs. per sq. ft.)</i>
Buildings	Less than 300	20
	Above 300	Add 0.025 lb. per foot for each foot above 300
Towers, Tanks and Chimneys	Less than 200	20
	Above 200	Add 0.025 lb. per foot for each foot over 200
Solid Signs	Less than 100	30
	Above 100	Add 0.025 lb. per foot for each foot above 100
Open Signs	For all heights	Increase wind pressure established for solid signs by 1/3

68-4.2. Every exterior wall shall be designed and constructed to withstand the pressures required in section 68-4.1, acting either inward or outward.

68-4.3. (a) Outward Pressures. The roofs of all buildings or other structures shall be designed and constructed to withstand pressures, acting outward normal to the surface, equal to seventy-five per cent of those established in Table 68-4.1 for the corresponding height zone in which the roof is located and applied to the entire roof area.

(b) Inward Pressures. Roofs with slopes greater than thirty degrees shall be designed and constructed to withstand pressures, acting inward normal to the surface, equal to those established in Table 68-4.1 for the height zone in which the roof is located and applied to the windward slope only.

(c) Overhangs. Overhanging eaves and cornices shall be designed and constructed to withstand upward pressures equal to twice those established in Table 68-4.1.

68-4.4 Chimneys, tanks and towers shall be designed and constructed to withstand the pressures established in Table 68-4.1 applied to the projected vertical area multiplied by the following factors.

<i>Shape.</i>	<i>Factor</i>
Square or rectangular structures	1.00
Hexagonal or octagonal structures	0.80
Round or elliptical structures	0.80

68-4.5. (a) Signs in which the projected area exposed to wind consists of seventy per cent or more of the gross area as determined by the over-all dimensions shall be classed as solid signs; those in which the projected exposed area is derived from open letters, figures, strips and structural framing members, the aggregate total area of which is less than seventy per cent of the gross area so determined, shall be classed as open signs.

(b) All signs shall be designed and constructed to withstand the horizontal pressures shown in Table 68-4.1 applied to the projected exposed area, allowing for wind from any direction.

68-4.6. All flag poles shall be designed to resist a wind pressure of one and one-half pounds per square foot of flag area applied at the top of the pole and an additional pressure of fifty pounds per square foot on the vertical projection of the pole.

68-4.7. (a) For combined stresses due to dead, live and wind loads, the allowable stresses in materials may be increased one-third, provided the section thus determined is at least as strong as that required for dead and live load alone. Snow load shall be considered a live load.

68-4.8. (a) Overturning. The overturning moment due to the wind load shall not exceed two thirds of the moment of stability of the building or other structure due to the dead load only, unless the building or other structure is anchored so as to resist the excess overturning moment without exceeding the allowable stresses for the materials used.

(b) Sliding. When the total resisting force due to friction is insufficient to prevent sliding, the building or other structure shall be anchored to withstand the excess sliding force without exceeding the allowable stresses for the materials used. Anchors provided to resist overturning moment may also be considered as providing resistance to sliding.

68-4.9. Adequate anchorage of the roof to walls and columns, and of walls and columns to the foundations to resist overturning, uplift and sliding shall be provided in all cases.

68-4.10. Provisions shall be made for wind stress during erection of a building or other structure.

68-5. (a) *Walls.* In the design of basement walls and similar vertical or near vertical structures below grade, provision shall be made for the lateral pressure of adjacent soil. Allowance shall be made for possible surcharge from fixed or moving loads. When a portion, or the whole, of the adjacent soil is below a freewater surface, computations shall be based on the weight of the soil diminished by buoyancy, plus full hydrostatic pressure.

(b) *Floors.* In the design of basement floors and similar horizontal or near horizontal construction below grade, the upward pressure of water, if any, shall be taken as the full hydrostatic pressure applied over the entire area. The hydrostatic head shall be measured from the underside of the construction. Basement slabs reinforced or otherwise shall have a minimum thickness of four inches. [Amend. Coun. J. 11-7-58, p. 8380.]

68-6. (a) *Railings.* Stairway, balcony and other guard railings, both exterior and interior shall be designed to resist a horizontal thrust of 50 pounds per linear foot applied at the top of the railing.

(b) *Scuttles and Skylights.* Scuttles and ribs of skylights shall be designed to support a concentrated load of 200 pounds occupying an area of two and one-half feet square and so placed as to produce maximum stresses in the affected members.

CHAPTER 69

MATERIALS, METHODS AND TESTS

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69-3.	Classification of construction materials	69-5.2.	Tests of materials
69-3.1.	Controlled materials	69-5.3.	Tests of structural assemblies
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69-4.1.	Adopted standards	69-6.	Prefabricated construction
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69-1. The provisions of this section shall govern the quality and strength of materials and the methods of design and construction hereafter used in the construction of buildings and structures. Materials and methods of design and construction shall conform to the requirements of accepted engineering practice and the recognized standards consistent therewith.

69-2. Unless otherwise required herein, used materials which meet the minimum requirements for new materials and all other special requirements of the code shall be permitted.

69-3. All materials and methods used in the design and construction of buildings and structures shall be classified as "controlled materials" and "ordinary materials" as defined herein.

69-3.1. Controlled materials as applied to the requirements of this code means a building, structure, or part thereof which has been designed or constructed under the following conditions:

(a) All controlled materials shall be selected or tested to meet the special strength, durability and fire resistance requirements upon which the design is based.

(b) The design, preparation of working drawings, including details and connections, the checking and approval of all shop and field details and the inspection of the work during construction shall be under the supervision of a registered architect or structural engineer.

The records of all tests, inspections and detail approvals shall be made available to the commissioner of buildings at all times during the progress of the work, and such records as he may designate shall be filed with the department of buildings.

69-3.2. Ordinary materials are materials meeting the requirements of the code for minimum strength, durability and fire resistance for average materials, without special selection, testing and supervision, as required for "controlled materials."

69-4. The regulations, specifications, standards and tests of the technical organizations which are referred to in this code are hereby incorporated herein by such reference with the same effect as though set forth. Authenticated copies of all such regulations, specifications, standards and tests shall be kept on file in the office of the commissioner of buildings, available for public inspection and use.

69-4.1. The following shall be deemed to represent, for the purposes of this code, accepted engineering practice with respect to the materials, equipment, systems and methods of construction respectively specified therein, except as otherwise specifically provided in this code or in any regulation adopted pursuant hereto.

(a) *Foundations.*

Piles—Timber.

ASTM D25-52T

Piles—Welded and Seamless.

Steel Pipe

ASTM A252-46

Piles—Wood Preservative.

Treatment Douglas Fir
Southern Pine
Creosoted Treatment

AWPA-C1-1956
AWPA-C3-1954
AWPA-C12-1951

(b) Masonry.

American Standard Building Code.
Requirements for Masonry—
Miscellaneous Publication M174

USDC-1944

(c) Wood.

National Design Specifications for Stress—
Grade Lumber and Its Fastenings

NLMA-1944. revised 1953

Glues—for Laminated and Built-up Members

FS CG-496

Plywood—Douglas Fir

NBS-CS45-48

Plywood—Hardwood

NBS-CS-35-49

Plywood—Western Hemlock

NBS-CS122-45

(d) Reinforced Concrete.

Building Regulations for Reinforced Concrete
except for section 601 (b) and Appendix A600

ACI-318-1956

(e) Reinforced Gypsum.

Reinforced Gypsum Concrete

ASA-A59.1-45

(f) Steel and Metals.

Specifications for Design.

Fabrication and Erection of Structural Steel for Buildings AISC-1949

Specification for the Design of

Light Gauge Structural Members

AISI-1946

Standard Specification for Steel Joist Construction

SJI-1951

(g) Plastering.

Including Requirements for Lathing and Furring

Standard Specifications for Gypsum Plastering

ASA-A42.1-1946

Standard Specifications for Portland Cement Stucco

ASA-A42.2-1946

and Portland Cement Plastering

ASA-A42.3-1946

(h) Single Family Dwellings.

Minimum Property Requirements for Properties of One
or Two Family Living Units Located in the State of Illi-
nois, Sections 402, 403, 406, 408 and 410 to 414 inclusive,
except 'Note' to, and paragraph 3 of, section 406-G shall
not apply. See section 68-5(b) which excepts FHA requirement 406-E.-
4a.

FHA-1947

(i) Abbreviations.

ACI American Concrete Institute.

AISC American Institute of Steel Construction.

AISI American Iron and Steel Institute.

ASA American Standards Association.

ASTM American Society for Testing Materials.

AWPA American Wood Preservers Association.

FHA Federal Housing Administration.

FS Federal Specifications.

GA Gypsum Association.

NBS National Bureau of Standards, Department of Commerce.

NLMA National Lumber Manufacturers Association.

SJI Steel Joist Institute.

USDC United States Department of Commerce.

[Amend. Coun. J. 1-20-50, p. 5758; 10-8-52, p. 3243; 1-26-53, p. 4184; 5-28-58, p. 7799; 11-7-58, p. 8380.]

69-5. Tests of structural materials when required shall comply with the provisions of sections 69-5.1 to 69-5.5, inclusive.

69-5.1. The selection and construction of all test specimens and the details of test procedure herein shall conform to the applicable standards of authoritative testing agencies and laboratories. All test specimens and constructions shall be truly representative of the materials, workmanship and details to be normally applied in practice.

69-5.2. (a) When the strength, durability, weather-resistance and other qualities of a material necessary to the conditions of its use have not been established by accepted engineering practice, or are in reasonable doubt, tests shall be made as hereinafter provided.

(b) Tests of materials shall also be made where specifically required by the provisions of this code.

(c) Materials, when required, shall be subjected to sustained and repetitive loading to determine resistance to fatigue, and to tests for durability and weather-resistance when applicable to the use of the material.

(d) When not otherwise required in this code, the applicable standards and specifications of the American Society for Testing Materials shall be deemed accepted practice in the conduct of tests of materials, assemblies and systems.

69-5.3. (a) When a structural assembly is not capable of design by accepted engineering analysis, or when there is reasonable doubt as to its strength or stability, the safe load-bearing capacity of such structural assemblies shall be determined by tests acceptable to the commissioner of buildings.

(b) Such tests shall simulate the loads and conditions of application to which the complete structure will be subjected in normal use.

69-5.4. In evaluating the physical properties of structural assemblies, the structural requirements shall be based on the following conditions of acceptance.

(a) *Floor, Wall and Roof Transverse Tests.*

(1) *Test Load.* The test assembly shall sustain without failure, superimposed loads equal to two and one-half times the design live load.

(2) *Deflection.* Under design live load, the deflection shall be not greater than one three-hundred sixtieth of the span for plastered construction and one two-hundred fortieth of the span for unplastered construction.

(3) *Residual Deflection.* If the deflection is greater than the computed theoretical deflection after twenty-four hours under the total static test load, upon removal of the load the construction shall recover not less than three-quarters of the total test load deflection.

(b) *Wall and Partition Compression Tests.*

(1) *Test Load.* The assembly, both with and without window framing, shall sustain without failure, superimposed loads equal to two and one-half times the vertical design live loads.

(2) *Recovery.* After twenty-four hours under the static test load, and after removal of the superimposed load, the specimen shall recover not less than one-half of all vertical and horizontal distortion and strain.

(c) *Wall Racking Tests.*

(1) *Test Load.* The assembly shall sustain the design live load without excessive distortion and not less than two and one-half times the design live load without failure.

(2) *Recovery.* After twenty-four hours under the total static load, upon removal of the load, the construction shall recover not less than one-half of the total deflection.

(3) *Comparative Tests.* When not available from existing authoritative test data, the building official may require comparative tests of standard traditional forms of construction assemblies of similar dimensions and sizes, to assist in determining the adequacy of the new construction.

(d) *Concentrated Load Tests.* Where design for concentrated loads is required in section 62-8, floor constructions not capable of design shall be sub-

jected to a concentrated load test when such loading exceeds in stress effect the prescribed uniformly distributed load.

69-5.5. (a) Whenever there is reasonable doubt as to the stability or structural safety of a completed building or structure, or part thereof, for the intended use, the commissioner of buildings may require a load test of the building unit or portion of the structure.

(b) Unless otherwise provided for in this code, the structure under consideration shall be subjected to a superimposed load equal to two times the design live load which shall be left in position for a period of twenty-four hours. If during the test, or upon removal of the test load, the structure shows evidences of failure, he shall order such reinforcement or modifications deemed necessary to insure adequacy of the structure for the rated capacity; or in lieu thereof, he may determine the safe load capacity to which the structure shall be limited.

(c) The structure shall be considered to have successfully passed the test if the total deflection does not exceed the theoretical deflection computed by accepted engineering formulae, or if the total deflection exceeds the theoretical value, the structure shall be considered safe for the design load if it recovers seventy-five per cent of the maximum deflection within twenty-four hours after removal of the test load.

69-6. (a) *Definition.* A prefabricated assembly is a building unit, the parts of which have been built up or assembled prior to incorporation in the building.

(b) *Performance Standards.* Prefabricated construction shall comply with all requirements of this code and with accepted engineering practice as to structural strength, fire resistance, weather resistance, durability, sanitation and other required qualities.

(c) *Tests.* Tests shall be required as provided in section 69-5. The commissioner of buildings may also require, when not available from existing authoritative test data, comparative tests of standard types of construction for similar uses.

69-7. Materials other than solid wood used for the outer surface of exterior walls shall be weather resistant and durable and shall not be subject to damage by continued exposure to moisture or frost. Such materials shall be not less resistant to moisture absorption than Grade MW clay or shale brick as determined by the standard Specifications for Building Brick (ASTM C62-44). Veneers of metal shall be of non-corrosive materials or shall be protected on all sides with porcelain enamel of equally effective corrosion resistive treatment. [Amend. Coun. J. 1-20-50, p. 5758.]

69-8. When welded construction is used the owner or his representative shall furnish to the commissioner of buildings a certificate from a laboratory of recognized standing certifying that all welding of all structural members was done under its inspection and meets all requirements of the architect's or structural engineer's design drawings and specifications, and further that all welders were certified by a laboratory of recognized standing.

Upon completion of all structural welding operations, the contractor responsible for the fabrication and erection of the structure shall furnish to the commissioner of buildings a certificate showing that the fabrication and erection of such welded structure, including those welds not inspected by the testing laboratory, have fulfilled the requirements of the architect's or structural engineer's design drawings and specifications.

[Passed. Coun. J. 12-29-58, p. 9324.]

CHAPTER 70

FOUNDATIONS

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		70-13.1.	Bells
		70-13.2.	Allowable loads and stresses
		70-13.3.	Tests

70-1. (a) Every building or structure shall be supported on footings, piles, foundation columns, piers or caissons complying with the requirements of this section.

(b) The encroachment of foundations on public property shall be governed by the provisions of section 77-2.1.

70-2. Bearing values of soils, borings, and tests shall be governed by the provisions of sections 70-2.1 to 70-2.5, inclusive.

70-2.1. Insofar as practicable, the following terms shall be used in the description and classification of sub-surface materials:

(a) Solid Rock. Sound, unweathered limestone without visible voids, known to have a thickness of at least eight feet.

(b) Soft Rock. Weathered or porous limestone, rock containing fissures, shale or other rock material not included under (a).

(c) Boulders. Rounded to angular rock fragments having a least dimension not less than eight inches.

(d) Gravel. Cohesionless aggregate of rounded to angular rock fragments ranging in size from one-quarter inch to eight inches.

(e) Sand. Cohesionless aggregate of rock fragments or grains ranging in size from 0.06 mm. to one-quarter inch. Deposits of sand shall be described as loose or compact.

(f) Inorganic Silt. Cohesionless aggregate of grains ranging in size from 0.002 mm. to 0.66 mm. Aggregate is non-plastic and consists of grains not distinguishable by the naked eye. Deposits of inorganic silt shall be described as

loose or compact. A lump of the air-dried material has very little resistance to crushing.

(g) **Clay.** Cohesive soil, plastic within wide range of water content. The consistency of a clay shall be defined by the strength of a fairly undisturbed cylinder whose length is from 1.5 to 2 times its diameter, as follows:

<i>Consistency</i>	<i>Unconfined Compressive Strength —Tons per Square Foot</i>
Very soft	less than 0.35
Soft	0.35 to 0.59
Stiff	0.60 to 0.99
Tough	1.0 to 1.9
Very tough	2.0 to 3.9
Hard	4.0 to 7.9

(h) **Hardpan.** Cohesive or cemented material that offers great resistance to hand excavating tools.

(i) **Organic Soil.** Soil containing significant percentage of partly or wholly decomposed organic matter. According to the character of the constituents, the terms organic clay, organic silt or peat shall be used.

70-2.2. All applications for building permits for (1) the construction of a permanent structure, or (2) for the alteration of a permanent structure involving an increase in load on the foundations, or (3) for the underpinning of a structure, shall be accompanied by a statement from the architect or structural engineer as to the character of the soil, satisfactory to the commissioner of buildings. Where there is reasonable doubt as to the character or bearing capacity of the soil, the commissioner of buildings may require such borings, test pits or test loads as may be necessary to determine the actual conditions.

70-2.3. (a) Whenever borings are required to determine the subsurface conditions, they shall be made in accordance with the requirements of this section.

(b) All borings shall be made by a procedure that provides information capable of serving as a basis for the classification of the subsurface materials as specified in section 70-2.1. In particular, data shall be obtained to ascertain the consistency of clays.

(c) The boring report shall contain a record of all strata encountered, including their color, texture and resistance to penetration or other measure of relative density or consistency. If intact samples are removed and tested, the results of the tests shall be added to the report. All materials encountered shall be classified in accordance with section 70-2.1.

(d) The boring report shall contain the elevation of the ground surface with respect to city datum, the elevation of the water table and any other significant data concerning groundwater conditions. A plat showing the location of the borings with reference to a permanent coordinate system shall accompany the report.

(e) The boring report shall indicate the type of drilling and sampling tools used, the size and depth of casing, the method of determining the relative density or consistency, and the reason for discontinuing boring operations. The date of beginning and of completion of each boring shall be recorded.

70-2.4. (a) Except when determined by field loading tests or by analysis based on laboratory tests, or both, the maximum allowable pressure on the supporting soils at the bottom of the footings shall not exceed the values established in Table 70-2.4 (a).

TABLE 70-2.4 (a). BEARING VALUES OF SOILS

<i>Type of Soil</i>	<i>Maximum Pressure Pounds per Square Foot</i>
Sand—compact and clean	5,000
Sand—silty and compact	3,000
Inorganic silt—compact	2,500
Clay—very soft	500
Clay—soft	1,500
Clay—stiff	2,500
Clay—tough	3,500
Clay—very tough	4,500
Clay—hard	6,000
Gravel	6,000
Hardpan	12,000
Solid rock	200,000
Organic soil	0
Filled ground or loam	500

(b) Exceptions to Allowable Bearing Values.

(1) Variation in Soils. Where portions of the foundations of the same structure rest upon soils which vary substantially in bearing value, special provisions shall be made to prevent serious differential settlements which will impair the safety of the structure.

(2) Where the bearing materials directly under a foundation overlie a stratum having smaller allowable bearing values, these smaller values shall not be exceeded at the level of such stratum. Computation of the vertical pressure in the bearing materials at any depth below a foundation shall be made on the assumption that the load is spread uniformly at an angle of sixty degrees with the horizontal.

(3) Subject to the approval of the commissioner of buildings, bearing values greater than those required in section 70-2.4 may be used if analysis based on laboratory tests, field loading tests or other pertinent information demonstrate that the greater values will not lead to excessive settlement.

70-2.5. (a) Whenever the bearing value of soil is in reasonable doubt or when it is desired to use soil bearing values in excess of those established in Table 70-2.4 (a), the allowable load on a bearing material may be determined by test in accordance with the requirements of this section.

(b) Test Procedure.

(1) A sufficient number of tests shall be made to determine the bearing value of the soil over the entire building site.

(2) Each load test shall be an area of not less than four square feet, except that such tests on soils having a bearing capacity of more than 10,000 pounds per square foot may be made on an area of not less than one square foot.

(3) Loads shall be applied in increments not exceeding twenty-five per cent of the proposed safe load until the total load reaches 200 per cent of the proposed safe load.

(4) The increments up to the proposed bearing value shall be applied at uniform intervals such that the proposed safe load is reached in not less than eight hours. This load shall remain until no measurable settlements shall occur in a period of sixteen hours. The total test load shall then be completed in not less than eight hours by adding equal increments at uniform

intervals. The total test load shall remain until no measurable settlement occurs in a period of sixteen hours.

(5) Measurements of settlements before and after each increment of load shall be taken and recorded diagrammatically.

(c) Conditions of Acceptance. The proposed safe load shall be approved if the following conditions are satisfied.

(1) The total settlement under the proposed safe load shall not exceed three-eighths inch, and the total settlement under double the design load shall not exceed one inch.

(2) The proposed safe load shall not cause pressure on any underlying soil stratum in excess of maximum pressures established in Table 70-2.4 (a). If the above conditions are not satisfied, the allowable safe load shall be determined by selecting a reduced load from the load-settlement diagram, such that the above conditions are satisfied.

70-3. Footings shall be provided under walls, piers or columns where required to distribute their loads in accordance with the allowable bearing values of the supporting soils as provided in section 70-2. Footings shall comply with the provisions of sections 70-3.1 to 70-3.3, inclusive.

70-3.1. Footings shall be so proportioned as to insure a minimum of unequal settlement.

70-3.2. All footings shall be carried to a depth of at least three feet six inches below the adjoining ground surface, except that a reinforced concrete slab foundation extending over the entire area below a one-story building shall be permitted at a lesser depth below the adjoining ground surface when so designed as to eliminate structural damage from frost action.

70-3.3. (a) General. Footings shall be constructed of solid masonry or concrete with or without reinforcement and shall be so designed that stresses in the material used shall not exceed the maximum allowable stresses required in the following chapters of this code.

- (1) Reinforced concrete footings, Chapter 73.
- (2) Plain concrete footings, Chapters 71 and 73.
- (3) Masonry footings, Chapter 71.

(b) Masonry Footings. Footings constructed of solid masonry units shall have a depth at least twice the total projection beyond the wall or column base. When brick work in foundation walls is stepped to form a footing, the maximum offset for each course shall be one and one-half inches.

(c) Steel Grillage Footings. When structural steel members are used in footing construction, such members shall be entirely encased by at least three inches of concrete, and the space between the members shall be entirely filled with cement grout. Stresses in steel members shall not exceed the allowable stresses required in chapter 74.

70-4. (a) *Minimum Spacing.*

(1) A wall supported by piles shall rest on not less than a double row of piles not less than one foot apart with the piles staggered on both sides of the wall centerline, unless connected to permanent construction which provides lateral support.

(2) A column or pier supported by piles shall rest on not less than three piles unless connected to permanent construction which provides lateral support.

(3) The minimum center-to-center spacing of piles shall be not less than twice the greatest diameter of a round pile, nor less than twice the diagonal dimension of a rectangular or rolled structural steel pile, nor less than two feet six inches.

(b) *Pile Caps.* Pile groups shall be capped with concrete properly designed to transmit the superimposed load to the pile group, in accordance with the requirements of chapter 73. [Amend. Coun. J. 1-20-50, p. 5758.]

70-5. The allowable loads on piles shall be governed by the provisions of sections 70-5.1 to 70-5.4, inclusive. The average compressive stress on any cross-section of a pile, under such portion of the design load as is carried to that section, shall not exceed the allowable value for the material as provided in chapters 72, 73 and 74. All concrete in piling shall have a minimum ultimate compressive strength of 3,000 pounds per square inch.

70-5.1. For pile loads not exceeding twenty-five tons for timber piles, nor forty tons for concrete piles, concrete-filled steel pipe piles and rolled structural steel piles, the allowable pile loads may be determined by the value R obtained by one of the following formulas:

(a) For piles or mandrels whose weight is equal to or less than the weight of the striking parts.

(1) For single-acting steam hammers:

$$R = \frac{2WH}{S + 0.1}$$

(2) For double-acting and differential steam hammers:

$$R = \frac{2E}{S + 0.1}$$

in which:

R=allowable pile load in pounds.

W=weight of striking part of hammer in pounds.

H=effective height of fall in feet.

E=actual energy delivered by the hammer per blow in foot-pounds.

S=penetration of pile per blow, in inches, determined under conditions acceptable to the commissioner of buildings.

(b) For piles or mandrels whose weight is greater than the weight of the striking parts.

(1) For single-acting steam hammers:

$$R = \frac{2WH}{S + 0.1} \frac{(1 - 0.1 \frac{P}{W})}{W}$$

(2) For double-acting and differential steam hammers:

$$R = \frac{2E}{S + 0.1} \frac{(1 - 0.1 \frac{P}{W})}{W}$$

in which:

P=weight of pile or mandrel in pounds.

Other terms as defined in (a) above.

70-5.2. For pile loads exceeding twenty-five tons for timber piles, or forty tons for concrete piles, concrete-filled steel pipe piles, and rolled structural steel piles, the allowable pile load shall be determined by control load tests as required in section 70-5.3.

70-5.3. (a) The number of control test piles to be driven at a foundation site shall be determined by the structural engineer or architect by the degree of variation in soil conditions as indicated by the test borings at the site or other reliable information as described in section 70-2.2.

(b) A pile to be tested shall be loaded to at least double the proposed allowable load, the load being applied in equal increments of not over twenty-five per cent of the proposed allowable load. The proposed allowable load shall be reached in not less than eight hours, and shall be maintained until no measureable settlement is observed in a period of sixteen hours. The total test load shall be reached in not less than eight hours after the first over-load increment is applied, and shall be maintained until no measurable settlement is observed in a period of sixteen hours.

(c) Measurements of the settlements shall be taken and recorded immediately before and after each increment of load is added. In determining the settlement, proper deduction shall be made for elastic compression of the pile under test load.

(d) The proposed allowable load shall be considered acceptable if the total net settlement under the total test load, after the elastic compression of the pile under the test load has been deducted, does not exceed 0.01 inch per ton of total test load.

(e) The proposed allowable load, if shown to be acceptable under section 70-5.3 (d), shall be allowable on all piles driven into the same soil conditions if the driving resistances are equal to or greater than that of the control test pile for the comparable driving distance, all other factors being equal.

70-5.4. (a) Where the resistance of a pile is developed in or above a compressible soil layer, the settlement due to compression of this soil shall be considered in the design.

(b) Where piles are jetted into position, allowable loads shall be determined either by section 70-5.1 or 70-5.3.

70-6. Timber piles shall comply with the provisions of sections 70-6.1 to 70-6.3, inclusive.

70-6.1. Timber piles shall be single pieces of timber of approved species containing no defects which will materially affect their strength or durability. Piles shall have an approximately uniform taper from butt to tip. A straight line from the center of the butt to the center of the tip shall lie within the body of the pile. Piles shall have a diameter at the tip of not less than six inches and a diameter at the cut-off of not less than ten inches for piles not more than twenty-five feet long, and not less than twelve inches for piles more than twenty-five feet long.

70-6.2. All untreated timber piles shall be cut off at a level not less than one foot below the permanent ground water level.

70-6.3. Timber piles above permanent ground water level, shall be treated to prevent decay in accordance with accepted engineering practice as required by section 69-4.

70-7. Precast concrete piles shall comply with the provisions of sections 70-7.1 and 70-7.2.

70-7.1. Piles shall be reinforced to resist both handling and driving stresses. The diameter or least lateral dimension of precast concrete piles shall be not less than eight inches, and at the top shall be at least two per cent of the length.

Concrete protection of reinforcing shall be a minimum of one and one-half inches.

70-7.2. Precast concrete piles shall not be handled nor driven until the minimum ultimate compressive strength of the concrete has attained a value of 3,000 pounds per square inch, nor shall they be handled or driven in such a way as to affect materially the bearing capacity of the piles.

70-8. Cast-in-place concrete piles shall comply with the provisions of sections 70-8.1 and 70-8.2.

70-8.1. (a) **Metal Casings.** Permanent metal casings shall in all cases be used with cast-in-place concrete piles. Each casing shall be inspected before filling with concrete, and shall not be acceptable if the casing has buckled or otherwise been damaged in such a way as to affect materially the load-bearing capacity of the pile.

70-8.2. The maximum compressive stress in cast-in-place concrete piles shall not exceed forty per cent of the ultimate compressive strength of the concrete. Where the metal casing is $\frac{1}{8}$ inch or more in thickness and is of suitable shape, the pile shall be considered to be a concrete-filled steel pipe pile.

70-9. Concrete-filled steel pipe piles shall comply with the provisions of sections 70-9.1 to 70-9.3, inclusive.

70-9.1. (a) **Steel Pipe.** Steel pipe shall comply with the specifications of the American Society for Testing Materials for Welded and Seamless Steel Pipe Piles (A252-44).

Pipe to be driven open-ended shall have a minimum nominal outside diameter of ten and three-fourths inches. Minimum nominal wall thickness for diameters less than fourteen inches shall be 0.25 inch. Minimum nominal wall thickness for diameters of fourteen inches or more shall be 0.375 inch.

Pipe to be driven closed-ended shall have a steel end of approved design. Minimum nominal outside diameter shall be ten and three-fourths inches. Minimum nominal wall thickness for diameters less than fourteen inches shall be 0.125 inch. Minimum nominal wall thickness for diameters of fourteen inches or more shall be 0.20 inch. If wall thicknesses are less than these values, the piles shall be considered as cast-in-place concrete piles.

70-9.2. The maximum compressive stress in concrete shall not exceed forty per cent of the ultimate strength of the concrete.

The maximum compressive stress in the steel pipe shall not exceed 12,000 pounds per square inch.

70-9.3. If the steel pipe is exposed to the air or other corrosive agents, one-sixteenth inch steel shall be deducted from the thickness of the metal in computing the allowable load. If there are indications, at the site at which piles are to be used, that conditions exist which will cause serious deterioration of the piles, suitable approved protective measures against such deterioration shall be employed.

70-10. Rolled structural steel piles shall comply with the provisions of sections 70-10.1 to 70-10.4, inclusive.

70-10.1. The steel in rolled structural steel piles shall conform to the requirements of chapter 74, and shall be of "H" form. They shall comply with the following requirements.

(a) The flange projection shall not exceed fourteen times the minimum thickness of metal in either the flange or the web.

(b) The nominal flange width shall be not less than eight inches.

(c) Flanges and webs shall have a minimum nominal thickness of three-eighths inch.

70-10.2. Splices in rolled structural steel piles shall develop the strength of the pile in compression, tension, bending and shear. [Amend. Coun. J. 1-20-50, p. 5758.]

70-10.3. The maximum compressive stress in the steel shall not exceed 12,000 pounds per square inch.

70-10.4. If the steel is exposed to the air or other corrosive agents, one-sixteenth inch shall be deducted from the thickness of the metal in computing the allowable load. If there are indications at the site at which piles are to be

used, that conditions exist which will cause serious deterioration of the piles, suitable approved protective measures against such deterioration shall be employed.

70-11. The use of types of piles not specifically mentioned in sections 70-6 to 70-10, inclusive, including composite piles, and the use of piles under conditions not specifically covered shall be permitted, subject to compliance with the provisions of chapters 72, 73 and 74.

70-12. Foundation columns shall consist of steel pipe shells extending to rock and completely filled with concrete with or without steel reinforcement or cores. Foundation columns shall comply with the provisions of sections 70-12.1 to 70-12.3, inclusive.

70-12.1. The pipe shall comply with the American Society for Testing Materials specifications for Welded and Seamless Steel Pipe Piles (A252-44) and shall have a minimum thickness of 0.30 inch. The nominal diameter of pipe shall not be less than twenty-two inches.

70-12.2. Foundation columns shall extend to solid rock, as defined in section 70-2.1 (a).

70-12.3. (a) If the base of the foundation column is less than one foot below the surface of the solid rock, the bearing load on solid rock shall not exceed one hundred tons per square foot or the value determined by tests as provided in section 70-2.5.

(b) If the base of the foundation column is one foot or more below the surface of the solid rock, the allowable bearing value may be increased twenty per cent for each foot of depth greater than one foot, but shall not exceed two hundred tons per square foot.

(c) When the column extends through a layer of unstable soil, the maximum design load shall be computed as a column with an unsupported length equal to the depth of the unstable layer of soil, plus four times the diameter of the column.

70-13. Foundation piers or caissons shall be of concrete with or without steel reinforcement, extending to solid rock or to hardpan and complying with the provisions of sections 70-13.1 to 70-13.3, inclusive.

70-13.1. Piers or caissons bearing on hardpan may be belled to increase load carrying capacity, provided that such bell shall be at least twelve inches thick at its edge and that the sides shall slope at an angle of not less than sixty degrees with the horizontal.

70-13.2. (a) The allowable bearing value shall be the bearing capacity of the hardpan or rock as provided in section 70-2.4 (a).

(b) The load used in determining the areas of the pier and of the belled bottom shall be the load supported at the top of the pier.

70-13.3. (a) Hardpan. Where piers are to be supported on hardpan, the thickness of the hardpan strata shall be determined by borings extended not less than six feet below the bottom of the pier.

(b) Rock. When piers extend to bed rock, the thickness of the solid rock strata shall be determined by borings extended not less than eight feet into solid rock. The rock bottom of not less than ten per cent of the total number of piers evenly distributed over the site shall be so drilled.

CHAPTER 71

MASONRY CONSTRUCTION

- 71-1. General

71-2. Grouted brick masonry

71-2.1. Definition

71-2.2. Construction

71-2.3. Allowable stresses
- 71-3. Reinforced brick masonry

71-3.1. General

71-3.2. Construction

71-3.3. Allowable stresses

71-3.4. Design

71-1. Masonry design and construction shall be in accordance with the provisions of the American Standard Building Code Requirements for Masonry, issued March 15, 1944, as Miscellaneous Publication M174 by the United States Department of Commerce, National Bureau of Standards, Sections 1 to 19, inclusive.

71-2. Grouted brick masonry shall comply with the provisions of sections 71-2.1 to 71-2.3, inclusive.

71-2.1. Grouted brick masonry is that form of construction made with brick in which interior joints of the masonry are filled by pouring grout therein as the work progresses.

71-2.2. All brick in the outer tiers shall be laid with full head and bed joints of Type A mortar and all interior joints shall be filled with grout. Brick in the interior tiers shall be placed or floated in grout poured between the two outer tiers. One of the outer tiers may be carried up not more than three courses before grouting but the other outer course shall be carried up not more than one course above the grout. Each pour of grout shall be stopped at least one and one-half inches ($1\frac{1}{2}$ ") below the top and properly stirred. The longitudinal vertical joints shall be not less than three-fourths inch ($\frac{3}{4}$ ") wide. Bonding headers shall not be used. Head or end joints shall be not less than one-half inch ($\frac{1}{2}$ ").

71-2.3. The allowable compressive stresses in pounds per square inch of gross sectional area for grouted brick masonry shall not exceed the following values:

Average ultimate compressive strength of units in pounds per sq. in.	Allowable compressive strength in pounds per square inch.
8000—plus	400
4500 to 8000.....	350
2500 to 4500.....	275
1500 to 2500.....	225

[Amend. Coun. J. 1-20-50, p. 5758.]

71-3. Reinforced brick masonry shall comply with the provisions of sections 71-3.1 to 71-3.4, inclusive.

71-3.1. Only grouted brick masonry shall be used in reinforced brick masonry construction.

71-3.2. The thickness of the grout or mortar at any point between brick and steel shall be not less than one-fourth inch ($\frac{1}{4}$ ") except that one-fourth ($\frac{1}{4}$ ") bars may be laid on in one-half ($\frac{1}{2}$ ") horizontal mortar joints. Vertical reinforcing shall be accurately placed and held in position before brickwork is started. In addition to the minimum required reinforcement, at least one-half ($\frac{1}{2}$ ") bar or equivalent shall be placed in all sides of every opening which exceeds twenty-four inches (24") in either dimension. The bars shall extend twenty-four inches (24") beyond the corners of the opening.

71-3.3. (a) The compressive strength of reinforced brick masonry $f'b$ shall be determined by tests on masonry prisms or may be assumed to be 60 per cent of the ultimate compressive strength of the brick used, when tested in accordance with Standard Methods of sampling and Testing Brick (A.S.T.M. Designation 267) but such 60% factor of the ultimate strength shall not exceed a value of 2000 lbs. per square inch and shall be the $f'b$ factor used in the table below.

(b) When no brick testing is done, the maximum value of $f'b$ to be used in the table below shall not exceed 1200 pounds per square inch.

(c) The allowable unit working stresses in reinforced brick masonry shall not exceed the values set forth in the following table.

Type of Stress.	Unit working stress in lbs. per sq. inch for any strength of reinforced brick masonry.
Compression=Axial .....	.18 $f'b$
Compression=Flexural .....	.33 $f'b$
Shear=No web reinforcement .....	.015 $f'b$
Shear=Web reinforcement—taking $\frac{2}{3}$ of vertical and $\frac{2}{3}$ of horizontal shear .....	.033 $f'b$
Bearing .....	.25 $f'b$
Modulus of Elasticity	1000 $f'b$
Modulus of Rigidity	400 $f'b$
Bond—	
Plain Bars	80
Deformed Bars	100

The limiting stresses in reinforcing steel shall be similar to that allowed for reinforced concrete masonry. [Amend. Coun. J. 1-20-50, p. 5758.]

71-3.4. The design of reinforced brick masonry shall be based on the assumptions, limitations and methods of stress determination specified for reinforced concrete work in chapter 73 and shall conform to the additional requirements herein given for reinforced brick masonry.

In reinforced masonry walls the minimum area of reinforcement shall be not less than .002 times the cross-sectional area of the wall, not more than two-thirds of which may be used in either direction. A lesser amount may be used to resist tensile stresses if the masonry is designed under the limitations as specified above for unreinforced grouted masonry. No required vertical reinforcement shall be less than three-eighths inch ($\frac{3}{8}$ ") in diameter.

CHAPTER 72

WOOD CONSTRUCTION

72-1. General
72-2. Maximum allowable unit stresses

72-3. Bolted joints
72-4. Ventilation

72-1. (a) Wood structural members shall be of sufficient size to carry the dead and required live loads without exceeding the allowable unit stresses required in this chapter. Adequate bracing and bridging to resist wind and other lateral forces shall be provided.

(b) *Abbreviations.*

NLMA.....National Lumber Manufacturers Association.

NDS.....National Design Specification for Stress-Grade Lumber and its Fastenings—NLMA, 1944, revised 1953.

(b) The applicable provisions of NDS shall govern the requirements and the design of all lumber and timber used structurally in buildings or structures and for the fastenings thereof for both ordinary materials as defined in section 69-3.2 or controlled materials as defined in section 69-3.1 except where either is specifically exempted or otherwise provided for in this chapter, and except that Table No. 1 of NDS shall not apply to ordinary materials. [Amend. Coun. J. 5-28-58, p. 7799.]

72-2. (a) When ordinary materials as defined in section 69-3.2 are used, the maximum allowable unit stresses established in Table 72-2 (a) shall be used in the design of wood members.

TABLE 72-2 (A).
MAXIMUM ALLOWABLE UNIT STRESSES
(POUNDS PER SQUARE INCH)

Species and Commercial Grade	Extreme fiber stress and tension parallel to grain (ft.)	Horizontal Shear (v)	Compression across grain (fc)	Compression parallel to grain** (fe)	Modulus of Elasticity E
<i>Cypress</i>	1300	120	300	900	1,200,000
<i>Douglas Fir</i>	1300	100	325	1200	1,600,000
<i>Plywood (Fir)</i>					
Built up					
Section	1500	100	400	1500	1,600,000
		35*			
Laminated					
Timber	1100	75	400	1500	1,600,000
<i>Hemlock</i>	1000	90	350	1100	1,400,000
<i>Oak</i>	1300	120	600	1000	1,500,000
<i>Redwood</i>	1100	75	300	1000	1,200,000
<i>Southern Pine</i>					
Longleaf	1300	120	450	1000	1,600,000
Shortleaf	1100	120	400	900	1,600,000
<i>Spruce</i>					
Sitka or					
Eastern	1000	75	300	800	1,200,000

* Shear in plane of piles.

** For L/D of eleven or less.

(b) The species of all lumber used for load bearing purposes under the terms of ordinary materials as defined in section 69-3.2 shall be stated on the plans.

72-3. For bolted joints with wood splice plates and with parallel to grain loading, where all lumber is close grain southern yellow pine or Douglas fir and where the thickness of the main member is not more than four times the bolt diameter, the allowable loads per bolt given in part VI of NDS may be increased by twenty-five per cent.

72-4. Wood construction shall not be enclosed without sufficient ventilation provisions to prevent rot. There shall be not less than one-half inch of air space at the sides of truss members and girders entering masonry. There shall be clearance of not less than eighteen inches between the bottom of floor joists and the ground beneath and such space shall be adequately ventilated by openings through the exterior walls.

CHAPTER 73

REINFORCED CONCRETE CONSTRUCTION

73-1. Portland cement concrete
73-1.1. Composite beams

73-2. Gypsum concrete.

73-1. The design and construction of reinforced concrete shall be in accordance with the Building Code Requirements for Reinforced Concrete (A.C.I. 318-56) adopted by the American Concrete Institute and published in the May 1956 proceedings of that Institute, Volume 52 except for section 601(b) and appendix A600. [Amend. Coun. J. 5-28-58, p. 7799; 11-7-58, p. 8380.]

73-1.1. (a) Where structural steel members are encased in concrete beams and protected by not less than the minimum thickness of concrete specified elsewhere in this code for the fireproofing of structural steel the resulting composite beam may be computed as a reinforced concrete beam in accordance with the assumptions stated in section 601 (a) of the Building Code Requirements for Reinforced Concrete referred to in section 73-1. The properties of sections of composite beams shall be computed on the basis of the transformed area of steel.

(b) In composite beams in which reinforcing bars are used in conjunction with structural steel members the properties of the cross section of the beam shall be computed on the basis of transformed area of steel and in accordance with the assumptions stated in paragraph (a).

(c) All provisions of this chapter shall apply to composite beams. Standard beam connections shall be considered as affording slight restraint only, and the span of composite beams supported by such connections shall be taken as the overall length of the encased steel member measured out-to-out of the connection angles. Where end connections properly designed to take the end moment of a continuous beam or the moment at the joint of a rigid frame are provided, or where proper supplementary reinforcement in the form of bars or plates is supplied to take this moment at the support, the span and moments of composite beams may be taken as specified for continuous or restrained beams.

(d) Built-up steel sections used in composite beams shall be designed in accordance with chapter 74 of this code for the forces to which they are subjected in the composite beam.

73-2. The design and construction of reinforced gypsum concrete shall be in accordance with the provisions of the "Building Requirements for Reinforced Gypsum Concrete" (A59.1-1945) adopted by the American Standards Association, June 19, 1945.

CHAPTER 74

STEEL AND METAL CONSTRUCTION

- | | |
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| 74-1. Structural steel | 74-5.4. Splicing |
| 74-2. Light gauge steel structural members | 74-5.5. Cast steel |
| 74-3. Steel joist construction | 74-6. Special steels |
| 74-4. Lightweight metal alloys | 74-6.1. General |
| 74-5. Cast iron | 74-6.2. Stresses |
| 74-5.1. Material | 74-6.3. Workmanship |
| 74-5.2. Thickness of metal | 74-6.4. Identification |
| 74-5.3. Limitations of use | 74-6.5. Allowable unit stresses in columns |

74-1. (a) Except as provided in paragraphs (b) and (c), the design, fabrication and erection of structural steel shall be in accordance with the requirements of the following document: Specifications for the Design and Erection of Structural Steel for Buildings. AISI-1946.

(b) Minimum thicknesses of metal established in the above document shall not apply to purlins, floor, roof and wall beams and similar secondary members supporting less than 200 square feet of roof, floor or wall area.

(c) The requirements of the above document do not apply to steel joists, members formed of flat rolled steel, light gauge steel construction, marquees (except structural frame), fire escapes, or other miscellaneous light steel construction.

74-2. (a) Except as provided in paragraph (b), the design, fabrication and erection of light gauge steel members shall be in accordance with the requirements of the following document: Specification for the Design of Light Gauge Steel Structural Members. AISI-1946.

(b) Hot-formed sections may be used. A light gauge steel member shall not be used to support more than 200 square feet of roof, floor or wall area.

74-3. The design, fabrication and erection of steel joists shall be in accordance with the requirements of the following document:

(a) "Recommended Abbreviated Regulation for Use in Building Codes" as published by the Steel Joist Institute in their Bulletin—Steel Joist Construction (1946 Edition)—SJI-1946.

74-4. Aluminum, magnesium and other lightweight metals and alloys shall be used for structural members of buildings and other structures only after approval by the commissioner of buildings of working stresses in compliance with accepted engineering practice.

74-5. Cast iron shall comply with the provisions of sections 74-5.1 to 74-5.5, inclusive.

74-5.1. Cast iron for building construction shall comply with the requirements of the following documents:

Gray Iron Castings. ASA G25.1-1942.

ASTM A48-1946.

74-5.2. The minimum thickness of cast iron shall be not less than the following:

(a) Columns. One-twelfth the smallest dimension of cross section with a minimum thickness of three-fourths of an inch.

(b) Bases and Flanges. One inch and reinforced with fillets and brackets.

(c) Lintels. Three-fourths of an inch and limited to a maximum span of six feet.

Where required by the commissioner of buildings, three-eighths inch round inspection holes shall be drilled in the section to exhibit the thickness.

74-5.3. Cast iron columns shall not be used where subject to eccentric loads which produce a net tension in the material, nor in any part of a structural frame which is required to resist stress due to wind.

74-5.4. Cores of superimposed columns shall be of the same dimensions above and below a splice.

74-5.5. Carbon steel casting for building construction shall comply with the requirements of the following document: Steel for Buildings and Bridges. ASTM-A7-42.

74-6. Special steels shall comply with the provisions of sections 74-6.1 to 74-6.5, inclusive.

74-6.1. Silicon, nickel and other alloy and high strength steels used in the design and construction of buildings and structures shall conform to the applicable standards of accepted engineering practice and may be used only under a controlled materials procedure.

74-6.2. The maximum allowable working stress in tension for special steels shall not exceed six-tenths of the low value of the yield point strength and all other stresses may be increased proportionately to the corresponding working stresses required in the applicable standards cited in section 74-1.

74-6.3. (a) Silicon steel over seven-eighths of an inch in thickness and nickel steel over one-half inch in thickness shall be drilled. Smaller thicknesses may be sub-punched and reamed.

(b) Sheared edges on all main material and on main gusset plates shall be planed to a depth of at least one-eighth of an inch.

74-6.4. All special steel shall be identified by mill test reports and shall be marked to distinguish it from all other classes of steel.

74-6.5. For axially loaded columns with values of L/r not greater than 120, the unit stress in pounds per square inch shall not exceed the following:

$$0.5Y - \frac{(0.5Y - 7,500)}{25,000} \frac{L^2}{r^2}$$

in which Y = yield point in pounds per square inch. [Amend. Coun. J. 1-20-50, p. 5758.]

* CHAPTER 74.1

PLASTER CONSTRUCTION

74.1-1		74.1-49	Registration of contractor
to	Standard specifications for	74.1-50	Application for registration
74.1-32	gypsum plastering	74.1-51	Contractor's bond
74.1-33		74.1-52	Registration fee and term
to	Standard specifications for	74.1-53	Penalty
74.1-48	Portland cement plastering		

74.1-1 to 74.1-32. (Standard Specifications for Gypsum Plastering A42.--1946, Including Requirements for Lathing and Furring,

also

74.1-33 to 74.1-48. (Standard Specifications for Portland Cement Stucco and Portland Cement Plastering A42.2-1946 & A42.3-1946).

74.1-49. It shall be unlawful for any person to engage in the business of installing plastering with necessary appurtenances thereto as heretofore defined, without being registered as a plastering contractor in the manner hereinafter set forth.

74.1-50. Any person desiring to engage in the business of plastering in the city of Chicago shall apply for registration to the commissioner of buildings. Upon the filing of such application in proper form and the payment of registration fee fixed herein, the commissioner of buildings shall register the applicant as a plastering contractor and shall issue to the applicant a certificate of registration which will authorize the applicant to engage in such business for the year in which it is issued; providing that such applicant has filed with the city clerk an indemnifying bond as hereinafter set forth. The commissioner of buildings shall keep a suitable record of such registration.

74.1-51. Prior to the issuance of a certificate of registration as a plastering contractor, the applicant shall file with the city clerk an indemnifying bond with good and sufficient sureties in the penal sum of ten thousand dollars, such bond being payable to the city of Chicago for the use of any persons with whom such applicant shall thereafter contract to do work to indemnify any such person for damages sustained on account of the failure of such applicant to perform the work so contracted for in accordance with the provisions and requirements of the city relating to the installation of plastering work with necessary appurtenances thereto.

74.1-52. The fee for initial registration as plastering contractor shall be three hundred dollars which sum shall be paid by the applicant to the city collector in advance upon filing his application; provided, however, that any registrant may renew his registration upon the payment of an annual renewal fee of one hundred dollars. The certificate of registration or renewal issued thereunder shall expire on the 31st day of December of the year in which it is issued.

74.1-53. Any person who shall engage in the business of plastering in the city of Chicago without obtaining a certificate of registration as herein provided for, or that shall violate any of the provisions of this chapter shall be fined not less than fifty dollars nor more than two hundred dollars for each offense and a separate and distinct offense shall be regarded as committed every day on which such person shall continue to operate contrary to the provisions of this chapter.

CHAPTER 75

SAFETY REQUIREMENTS

75-1. Guards for protection
75-1.1. Where required

75-1.2. Type of guards
75-2. Window cleaning devices

75-1. Guards to prevent persons from falling shall be provided as required in sections 75-1.1 to 75-1.2, inclusive.

75-1.1. Guards shall be required at every point of danger including the following:

(a) At all edges of every floor, balcony, mezzanine or other space used or intended for human occupancy which is at a height of more than two feet above the floor, ground or pavement directly below, except that loading platforms and similar uses need not be equipped with guards.

(b) At all windows or doorways having a sill two feet or less above the floor of a room or space, unless such window or doorway opens directly upon the ground, pavement or guarded space, the level of which is less than two feet below the sill of such opening or unless the construction of the window serves the same purpose.

(c) At all sides of every open areaway exceeding three feet in depth except the side providing access to a stairway.

75-1.2. Guards may be formed by walls, balustrades, grills or railings not less than three feet in height, by area gratings or by other approved devices.

75-2. Every window above the first story of any building other than Residential Units three stories or less in height shall be equipped with approved anchoring devices for window washers' safety harness attachments, except as follows:

(a) When a window is so constructed that it may be cleaned on both sides from the inside.

(b) When a window is so located that it may be cleaned from an outside floor, roof or balcony.

CHAPTER 76

SAFEGUARDS DURING CONSTRUCTION

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|---|---|
| <p>76-1. General</p> <p>76-2. Construction loads</p> <p>76-3. Scaffolding</p> <p>76-4. Protection of floor openings</p> <p>76-5. Temporary flooring</p> <p>76-6. Demolition</p> <p>76-6.1. Notification of commissioner of buildings</p> <p>76-6.2. Order of demolition</p> <p>76-6.3. Time limitation</p> <p>76-6.4. Filling of openings</p> <p>76-6.5. Debris</p> | <p>76-7. Walkways, barricades and fences</p> <p>76-7.1. Construction</p> <p>76-7.2. Requirements of new construction</p> <p>76-7.3. Additional stories</p> <p>76-7.4. Demolition</p> <p>76-7.5. Walkways and temporary side-walks</p> <p>76-8. Roofs and skylights of adjoining buildings</p> <p>76-9. Anchorage of party walls</p> |
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76-1. (a) *Statutory Provisions.* All persons having the control or supervision of any building in course of erection shall comply with an act of the Legislature of the State of Illinois entitled "An Act Providing for the Protection and Safety of Persons in or about Construction, Repairing, Alteration, or Removal of Buildings, Bridges, Viaducts, and other Structures and to Provide for the Enforcement Thereof", approved June 3, 1907, and enforced July 1, 1907.

(b) *Accepted Engineering Practice.* The provisions of the American Standard Safety Code for Building Construction of the American Standards Association, A-10.2-1944, shall be considered as accepted engineering practice with respect to safeguards during construction.

76-2. Provisions shall be made to insure that stresses due to wind loads, dead loads and loads due to material storage and erection equipment occurring during the erection of any structure shall not exceed the allowable stresses for materials as limited by the provisions of this code.

76-3. (a) *Construction.* All scaffolds for use in the erection, repair, alteration or removal of buildings shall be so constructed as to insure the safety of persons working on, or passing under or passing by the scaffold.

(b) *Overhead Protection.* When there is danger of objects falling on a scaffold from above, an approved overhead protection shall be provided not more than ten feet above the scaffold platform.

(c) *Material.* When the extent or location of scaffolding is such as to create an unusual fire hazard, the commissioner of buildings may require the use of non-combustible material or of treated fire-resistive lumber.

76-4. (a) *Covering of Openings.* All stairways, elevator openings, flues and all other openings in the floors shall be covered or properly protected.

(b) *Openings for Hoists.* All openings through which hoists operate shall be properly enclosed on all sides.

76-5. In buildings where construction of the super-structure precedes the construction of the permanent floor panels, a substantial temporary floor shall be constructed and maintained at a level not more than two floors below the level at which erection work is being performed.

76-6. The demolition of any building or structure shall be governed by the provisions of sections 76-6.1 to 76-6.5, inclusive.

76-6.1. Notice stating the date on which work is to begin shall be given to the commissioner of buildings of at least twenty-four hours before beginning the wrecking, demolishing or razing of any building or other structure.

76-6.2. In the wrecking, demolishing or razing of the structural elements of any building or structure, the work shall begin at the top thereof, and each story shall be completely razed or demolished and the material therefrom completely removed before beginning work on the next lower story.

76-6.3. All wrecking operations shall be completed within the time set by the commissioner of buildings.

76-6.4. On completion of demolition, the site shall be filled where necessary with clean soil, cinders or other inorganic material and graded to a level not lower than nor more than 12 inches above the level of sidewalks, alleys or adjoining property with proper allowance for settlement.

76-6.5. Debris caused from the demolition of a building or structure in excess of that required to fill openings as provided in section 76-6.4 shall be removed from the site as wrecking progresses. Salvaged material, if left on the premises, shall be neatly stored.

76-7. During the erection, alteration or demolition of any building, proper provisions shall be made for the protection of every public sidewalk or other public thoroughfare in accordance with the provisions of sections 76-7.1 to 76-7.5.

76-7.1. Where required in this section for protection of sidewalks or other public ways, sidewalk sheds, fences, barricades and aprons shall comply with the following requirements:

(a) Sidewalk sheds shall consist of a roof deck extending over the entire sidewalk, together with its supporting structural framework. The roof deck shall be constructed of not less than two layers of two-inch planking or of other approved materials of equal strength and shall be designed to support a superimposed load of not less than 250 pounds per square foot.

(b) Fences shall be not less than six feet high of solid construction sheathed with one-inch lumber or other approved materials of equal strength.

(c) Barricades shall consist of substantial railings or other barriers which will effectively prevent public access to the barricaded area.

(d) An apron is defined as a platform extending from the exterior wall of a building at any level. Aprons shall be constructed of not less than two layers of two-inch planking or of other approved materials of equal strength and shall be designed to support a superimposed load of not less than 250 pounds per square foot. Aprons shall extend not less than six feet from the building wall. Aprons shall slope downward toward the building wall or shall be provided with a substantial curb not less than twelve inches high at the outer edge.

76-7.2. When buildings are erected within ten feet of the street line, a sidewalk shed shall be provided and maintained during the period when materials are being placed or handled on the street front above the level of the sidewalk with the following exceptions:

(a) When the height of a building does not exceed three stories or forty feet, a barricade located not less than ten feet from the building may be used in lieu of a sidewalk shed.

(b) When the height of the building does not exceed four stories or fifty feet, a fence located not less than ten feet from the building may be used in lieu of a sidewalk shed.

76-7.3. When additional stories are added to an existing building, an apron shall be provided at the level of the lowest additional story and maintained during the period when materials are being placed or handled on the street front.

76-7.4. (a) When a building to be wrecked is located less than twenty-five feet from the street line, a sidewalk shed shall be provided except under the following conditions:

(1) When the height of the building does not exceed two stories or thirty feet, a barricade located not less than ten feet from the building may be used in lieu of a sidewalk shed.

(2) When the height of the building does not exceed three stories or forty feet, a barricade located not less than fifteen feet from the building may be used in lieu of a sidewalk shed.

(3) When the height of a building does not exceed four stories or fifty feet, a fence located not less than twenty-five feet from the building may be used in lieu of a sidewalk shed.

(b) Buildings or structures exceeding four stories or fifty feet in height and intended to be wrecked shall comply with the following protection requirements:

(1) The owner or his agent shall submit a drawing indicating fences, barricades, aprons, canopies and other safeguards which are to be used in connection with the wrecking program. This drawing shall be approved by the commissioner of buildings before a permit is issued to wreck such building or structure, and the safeguards indicated on such drawing shall be erected in strict compliance therewith.

(2) One apron shall be constructed for each four stories above adjoining sidewalk grade with the lowest apron located in the third story.

76-7.5. (a) When a permanent sidewalk is obstructed by a sidewalk shed, fence or barricade, temporary sidewalks shall be provided.

(b) Walkways and temporary sidewalks shall be not less than four feet wide, except that in congested districts the commissioner of buildings may require additional width.

(c) All walkways and temporary sidewalks shall be designed to support a live load of not less than 250 pounds per square foot.

(d) All temporary sidewalks shall be provided with railings and guards of dressed lumber. If such railings and guards are nearer the street curb than four feet, there shall be a guard rail of dressed lumber on the street side.

(e) When necessary to permit the delivery of materials to basements of buildings in process of erection, temporary sidewalks may be built at a height not exceeding four feet above the curb level of the street. Such temporary sidewalks shall have railings on both sides and shall be approached by ramps having a grade of not more than one in eight.

(f) Every covered walkway shall be kept well-lighted continuously between sunset and sunrise.

76-8. During the erection, alteration or demolition of any building or other structure carried on above the roof of an adjoining building, proper protection shall be provided for the roof and skylights of such building.

76-9. Before a permit is issued for the wrecking of a structure that has one or more party walls in common with one or more buildings, there shall be delivered to the department of buildings a certificate by a licensed architect or licensed structural engineer to the effect that the adjoining premises do not require anchorage, or if such certificate indicates that anchorage is necessary, the certificate shall be accompanied by a drawing signed and sealed by such architect or engineer and approved by the commissioner of buildings, indicating adequate anchorage of floor and roof joists. The adjoining premises shall be anchored in compliance with such drawing. The written consent of the owner of the adjoining premises permitting the anchorage shown on such drawing shall also accompany the certificate.

CHAPTER 77

USE OF PUBLIC PROPERTY

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| <p>77-1. Temporary use of streets and alleys</p> <p>77-1.1. Limits</p> <p>77-1.2. Extent</p> <p>77-1.3. Temporary use</p> <p>77-1.4. Roadway</p> <p>77-1.5. Removal</p> <p>77-2. Permanent occupancy of public property</p> | <p>77-2.1. Foundations</p> <p>77-2.2. Cornices, belt courses and similar projections</p> <p>77-2.3. Wheel guards</p> <p>77-2.4. Marquees and canopies</p> <p>77-2.5. Signs</p> <p>77-2.6. Sub-sidewalk space</p> <p>77-2.7. Fire escapes</p> <p>77-2.8. Zoning requirements</p> |
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77-1. Permits for the occupation of a street, alley or sidewalk may be issued only under the conditions complying with the requirements of sections 77-1.1 to 77-1.5, inclusive.

77-1.1. Such occupancy shall be limited to the storage and handling of building materials, the construction of temporary sidewalks and other uses incident to the erection, alteration or demolition of buildings as approved by the commissioner of buildings.

77-1.2. The extent of occupation shall not exceed one-third the width of the roadway, nor shall it extend within four feet of any steam or street railway track. Areas of occupancy shall be limited to streets, alleys and sidewalks adjoining the property upon which the building is to be erected, altered or demolished, except that the area may be extended if the written consent of, and a waiver of claims for damages against the city by the owners of adjoining properties is first obtained and filed with the commissioner of streets and sanitation. [Amend. Coun. J. 6-16-54, p. 7730.]

77-1.3. No temporary use of streets or alleys shall interfere with drainage of gutters, and no obstruction of any kind shall be placed so as to obstruct free approach to any fire hydrant, lamp post, fire alarm box, manhole or catch basin.

77-1.4. A roadway of ten feet clear width shall be maintained through any alley located along the building site.

77-1.5. Immediately upon completion of the building construction, all walkways, debris or other obstructions shall be removed, leaving the public property in as good condition as it was before such work was commenced.

77-2. The permanent occupancy of public property by any part of a building or structure hereafter erected shall be governed by the provisions of sections 77-2.1 to 77-2.8, inclusive.

77-2.1. Foundations may not project into nor encroach upon public ways except as herein provided. The commissioner of buildings may issue permits for any building for which it is contemplated that there shall be projections of the foundation or a part thereof into a public way under the following conditions:

(a) The portions of foundations above a level twenty feet below city datum may project into a public way four and one-half inches per foot of depth below sidewalk or alley grade but not more than thirty-six inches.

(b) Except as provided in paragraph (d), in no case shall foundations extend within five feet of the center line of any public way.

(c) Except where sub-sidewalk space is permitted, no foundation, or any part thereof, shall project into a public way in such manner as to add to the floor area of any building or structure.

(d) Portions of foundations, constructed lower than twenty feet below city datum, may project into a public way such distance as the commissioner of buildings may deem necessary for the stability of the building or structure of which they are a part.

77-2.2. (a) Cornices, rustications, quoins, moldings, belt courses, lintel, sills, oriel windows, pediments and similar projections of a decorative character may project beyond a street line not more than two feet, provided that every part of such projection is not less than twelve feet above the sidewalk level at any point and that the aggregate area of all such projection does not exceed five per cent of the wall area.

(b) When additions to existing buildings are erected, the commissioner of buildings may permit the extension of existing cornices, moldings and belt courses which do not comply with the requirements of this section but which were legal at the time of the adoption of this code.

77-2.3. Wheel guards less than twenty-one inches high may project into alleys a distance of not more than nine inches.

77-2.4. Marquees and canopies extending over a public way shall comply with the provisions of chapter 34.

77-2.5. Signs having a clear height of not less than ten feet may project over a public sidewalk to a point not less than two feet from the curb line.

77-2.6. The use of sub-sidewalk space shall be governed by the provisions of chapter 34.

77-2.7. Fire escapes hereafter erected shall not project over public property except under the following conditions:

(a) When the fire escape is erected to replace an existing required fire escape which projects over public property.

(b) When a fire escape is required to correct an existing exit hazard and cannot be properly located over vacant space on the lot on which the building is located.

77-2.8. Nothing in this section shall be construed to permit encroachments on public property prohibited by the Chicago Zoning Ordinance.

EXISTING BUILDINGS

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|----------|---|-----------|---|
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Housing Code

78-1. Every existing building, structure or part thereof, as herein defined, shall comply with the requirements of this chapter.

78-2. (a) *Existing Building*. A building, structure or part thereof which has been completed and ready for occupancy.

(b) *Pre-Ordinance Building*. Every existing building, structure or part thereof which was completed, or for the construction of which a permit was issued prior to the effective date of this ordinance. [Amend. Coun. J. 1-20-50, p. 5758.]

78-3. (a) *Maintenance Required*. Every existing building shall be so kept and maintained in conformity with the applicable provisions of this code, as to eliminate conditions hazardous to the public health and safety.

If there is any doubt as to the structural stability of any building or structure or parts thereof, the commissioner of buildings may request such building or structure or parts thereof, to be critically examined by a licensed architect or registered structural engineer employed by such owner, agent or person in charge, possession or control of any such building, structure or part thereof.

Said licensed architect or registered structural engineer shall render a report in writing, showing the structural condition of the building, structure or part thereof. Two copies of the report shall in turn be submitted to the commissioner of buildings—one copy of said report shall, if satisfactory, be retained by the commissioner of buildings, and one be returned to the owner, agent or person in charge, possession or control of said building, structure or part thereof, bearing a stamp of approval signed by said commissioner of buildings.

(b) *Application of Provisions.* Every existing building shall comply with the code requirements in force and applicable to such building at the time of its construction or alteration and shall also comply with such provisions of this code which are specifically made applicable to existing buildings.

(c) *Zoning.* Nothing in this chapter shall be interpreted to prevent the application of the Chicago Zoning Ordinance.

(d) *Registration of Ownership.* The owner of a multiple dwelling or a trustee holding title to such a building under a land trust or other form of trust agreement used as a multiple dwelling as that term is defined in section 48-2.2 of this code, excepting one or two family dwellings, shall file with the commissioner of buildings, a written registration statement containing the following information:

1. A description of the premises by street number or otherwise, in such manner as to enable the department to find the same.

2. The name and residence and business address of such owner, or trustee if such owner or trustee is a corporation, the name and address of such corporation and the name and address of president, secretary and registered agent thereof.

3. The name and residence and business address of a natural person twenty-one years of age or over, who is customarily present at an office in the city, for the purposes of transacting business, or who actually resides within the city, and who shall be designated by such owner or trustee as a managing agent in control of such building and responsible for the maintenance and operation of such building in accordance with the building and other provisions of this code applicable thereto, and authorized to receive court process on behalf of such owner or trustee in connection with the enforcement of the ordinances relating to such building. In the event of a corporate managing agent, said corporation shall designate an officer or agent as the managing agent. Said officer or agent designated as a managing agent shall meet the requirement of this paragraph as to location and residence. An owner or trustee who is a natural person and who meets the requirement of this paragraph as to location of the residence or place of transacting business of a managing agent, may designate himself as such managing agent. Nothing contained in this section shall be construed as preventing a corporation which is the owner or trustee of a building from designating as its managing agent with respect thereto, any officer or agent of such corporation who meets the requirements of this paragraph as to the location of the residence or place of transacting business of a managing agent.

Any such designation of a managing agent for purposes of this ordinance shall be terminated in either of the following ways provided a new registration form has been officially received and stamped by the department of buildings:

- (a) By filing with the department of buildings on form provided a written notice of such termination of agency signed by such agent, which shall state the date upon which it shall become effective, the name and address of the owner, or trustee and the address of the dwelling.

- (b) An owner or trustee shall terminate designation of a managing agent by filing with the department a written designation of a new managing agent made in conformity with the requirements of this section.

(c) Where a managing agent dies, or is declared incompetent, or resigns, the owner or trustee shall appoint a new managing agent in the manner above provided within five days of the effective date of death, declaration of incompetence, or resignation.

4. In addition to the foregoing registration statement, every such owner or trustee or his managing agent shall file with the commissioner of buildings on forms to be furnished by said commissioner a statement showing the number of family units and rooming units on each floor, basement and attic included, in said dwelling, the number of rooms in each family unit and rooming unit with proper designations, the size of each room and height of ceiling; the number of persons occupying each family unit and each rooming unit; the number and location of the exits from the family units and rooming units and fire escapes, if any; when, if any, an addition to or alteration of the building was constructed. If the foregoing statement is for any dwelling which has had an addition or alteration, the commissioner may request a plan layout of said dwelling, and such other information relative to said statement as the commissioner may require.

5. (a) It shall be the duty of the owner or trustee of such dwelling and managing agent in control thereof to cause to be posted and maintained at all times in such dwelling in a conspicuous public location an identification sign provided by the department of buildings. Any change in the ownership or trusteeship of such dwelling shall not necessitate issuance of or posting and maintenance of a new identification sign.

(b) The materials of which such identification signs shall be made and their form, content, size, location and manner of installation and maintenance, shall be as prescribed in regulations promulgated by the department of buildings.

6. Any person who signs any such application or answer, or any registration statement, statement and plan, or designation of a managing agent authorized or required, shall certify that all statements therein contained are to the best of his knowledge and belief, true and correct.

7. Any person who shall violate or assist in the violation of any provision of this registration of ownership ordinance shall be guilty of an offense punishable for a first offense with respect to a particular dwelling, by a fine of not less than ten dollars or not more than one hundred dollars or by imprisonment for not more than thirty days or both, and for a second or any subsequent offense with respect to such dwelling, by a fine of not less than ten dollars or more than two hundred dollars, or by imprisonment for a period not exceeding ninety days or by both such fine and imprisonment.

8. A fee for the initial filing or subsequent change of the registration of ownership statement or of the statement and plans shall be paid by the owner in the amount of two dollars.

[Amend. Coun. J. 3-2-50, p. 5896; 12-23-57, p. 7029; 1-17-58, p. 7149.]

78-4. Existing buildings shall comply with all applicable fire protection requirements of this code and with the special provisions of sections 78-4.1 to 78-4.5, inclusive [Amend. Coun. J. 1-21-59, p. 9627.]

78-4.1. Every pre-ordinance hotel more than two stories and basement in height, having sleeping accommodations for more than twenty-five persons above the second story, and every pre-ordinance hotel of any capacity more than four stories and basement in height shall comply with the requirements of section 62-3 pertaining to the protection of stairs, shafts and vertical openings, except as follows:

(a) Enclosing walls and partitions may be of construction providing fire resistance of not less than one hour.

(b) Doors required for protection of openings in enclosures may be Class C fire doors or may be doors of combustible material faced on both sides with materials not less fire resistive than sheet steel 18 gauge in thickness. Openings, if any, shall be glazed with wire glass and shall not exceed 144 square inches in area, except that existing openings not exceeding 1296 square inches in area may be permitted.

(c) Where the top or bottom riser in a stairwell is so located that the vertical enclosures therein required will not be practical to erect without unreasonable hardship, a horizontal cut-off shall be provided between floors; provided, however, that in such cut-off there shall be not more than three openings to dwelling units or other non-public spaces on each floor, and such dwelling units or other non-public spaces shall be separated from the corridor by partitions providing fire resistance of not less than one hour with all openings protected with self-closing Class C fire doors.

78-4.2. Every pre-ordinance building shall comply with the requirements of chapters 64 and 90 of this code pertaining to the installation of portable fire extinguishers and fire alarm systems.

78-4.3. In every pre-ordinance institutional building, every room used for the storage or application of anaesthetics consisting of flammable or explosive gases or mixtures, including cyclopropane, ether, ethyl chloride, ethylene, propylene, or any flammable liquids, shall have safeguards for installation and operation of such rooms and equipment as follows:

(a) Any cylinders containing anaesthetizing gases or liquids shall be plainly marked with the name of the substance which they contain and shall comply with the requirements of the Interstate Commerce Commission for such containers. Such cylinders or containers shall not be stored in any operating room. Approved regulators or gas flow devices shall be provided for any such substances except low pressure oxygen containers. No such regulators or gas flow devices shall permit the intermixing of gases by any error of manipulation.

(b) The construction and equipment of operating rooms shall comply with the applicable requirements of section 53-4.

78-4.4. Every existing or pre-ordinance building and buildings hereafter erected, two stories or more in height, used in whole or in part as Type I school, or used in whole as Type II school, and hospitals, infirmaries, nursing homes, nurseries, orphanages, sheltered-care homes, sanatoria and homes for the aged, as defined in section 48-3 of the code as Class B Institutional Units, and each of construction Type III-A, III-B, III-C, IV-A, IV-B shall comply in all respects with the provisions of section 64-1.2.

78-4.5. It shall be the duty of the principal or other person in charge of all school buildings to conduct fire drills, subject to the rules and regulations of the bureau of fire prevention of the fire department. Such fire drills shall be practiced not less than once each calendar month that such building is used for school purposes.

[Passed. Coun. J. 1-21-59, p. 9627.]

78-5. Existing buildings other than dwellings as defined in section 78-12 of this chapter shall comply with all applicable exit requirements of this code and with the special provisions of sections 78-5.1 to 78-5.3, inclusive. [Amend. Coun. J. 6-20-56, p. 2872.]

78-5.1. (a) In existing buildings where exits do not comply with the requirements of chapter 67 and in which hazardous conditions exist because of the number, width, construction or location of exits, the commissioner of buildings may order additional exits to assure adequate safety of the occupants.

(b) Every existing building shall have not less than the minimum number of required exits as prescribed in section 67-4.

78-5.2. In pre-ordinance buildings, the commissioner of buildings may approve the following types of exits in lieu of the required means of vertical exit prescribed in section 67-3.

(a) Fire escape stairways complying with the requirements of section 67-16 may be used in lieu of not more than fifty per cent of required stairs. [Amend. Coun. J. 6-20-56, p. 2872.]

78-5.3. All exit areas shall be lighted as required in section 67-17.

78-6. Every existing building shall be so constructed and maintained as to support safely the loads prescribed in chapter 68 of this code, except that in buildings of Mercantile, Industrial or Storage occupancies the commissioner of buildings may permit occupancy of buildings having lower load-bearing capacity when he is satisfied that such capacity will not be exceeded by the specific occupant. Such approved floor loads shall be posted as required in section 68-2.8.

In buildings where the safe load-bearing capacity is in doubt, owing to deterioration of materials or other reasons, the commissioner of buildings shall require load tests to determine the safe bearing capacity. Such load tests shall comply with the requirements of section 69-5.3.

78-7. Every existing building shall comply with all requirements of this code applicable to existing buildings, structures or parts thereof. [Amend. Coun. J. 12-23-57, p. 7029.]

78-8. All alterations and repairs to buildings or structures shall comply with the provisions of sections 78-8.1 to 78-8.9, inclusive.

78-8.1. (a) **Reproduction Cost.** For the purpose of this section, the reproduction cost of a building or structure shall be the estimated cost of constructing a new building of like size, design and materials at the site of the original structure, assuming such site to be clear.

(b) **Cost of Alterations or Repairs.** Cost of the alterations or repairs shall be construed as the total actual combined cost of such alterations or repairs made within a specific period of time, including the value of rebates, discounts, free services and other gratuities not normally granted or received in such operations.

(c) **Normal Maintenance Cost Excluded.** Costs of alterations, additions and repairs as defined in this section shall not include normal maintenance, repairs and replacement of the furnishings or the equipment of a building necessary to maintain the building in the condition required under the ordinance in effect when such building was constructed.

78-8.2. (a) When the occupancy of an existing building is so changed as to transfer it from one occupancy classification to another, the provisions of this code which are higher for the new occupancy than for the former occupancy shall be fully complied with.

(b) When a building is increased in height or area or is so converted or altered as to increase the number of dwelling units or persons accommodated, the building shall be made to comply with the applicable provisions of this code, except as otherwise provided in this chapter.

(c) One-hour separation from residential use is permissible provided the occupancy of the area used for school, or assembly purposes does not exceed 100 persons. Such separation shall consist of walls, partitions, floors, and ceilings of non-combustible construction or of construction consisting of wood studs or wood joists and a non-combustible surface material providing fire resistance of not less than one hour; this provision shall apply only to day nurseries that shall have been in operation at least sixty days before the effective date of this ordinance. [Amend. Coun. J. 11-7-58, p. 8380.]

78-8.3. No existing building shall be increased in height or area unless it is of a type of construction permitted for new buildings in the fire district in which it is located or is altered to comply with the requirements for such type of construction.

78-8.4. It shall be unlawful for any person to move any building from one

location to another unless such building is altered or reconstructed so as to conform to the provisions of this code governing such building in its new location at the time of moving the same.

78-8.5. When the combined total cost of alterations or repairs within any period of thirty months exceeds fifty per cent of the reproduction cost of a building or structure, such building or structure shall be made to conform to all requirements of this code applicable to new buildings or structures.

78-8.6. When the combined total cost of alterations or repairs within any period of thirty months exceeds twenty-five per cent but does not exceed fifty per cent of the reproduction cost of a building or structure, all new construction required in such additions, alterations or repairs shall conform to the requirements of this code for a new building or structure of like area, height and occupancy. Such building or structure, including new additions, shall not exceed the maximum areas and heights required in this code.

78-8.7. When the combined total costs of alterations and repairs to any portion of an existing building or structure within any period of thirty months does not exceed twenty-five per cent of the reproduction cost of the building or structure, all new construction required in such alterations or repairs shall comply with the requirements of this code for a new building or structure of like area height and occupancy except as follows:

(a) The commissioner of buildings shall approve minor structural additions, alterations or repairs which may be made with material conforming in strength and fire resistance to the materials with which the building or structure is constructed.

(b) Alterations, repairs and replacements which are non-structural and do not affect any member or part of the building or structure having required fire resistance may be made with materials conforming to those with which the building or structure is constructed.

78-8.8. Not more than twenty-five per cent of the roof covering of any building or structure shall be replaced in any twelve-month period unless the entire roof covering is made to conform to the requirements of this code for new buildings or structures.

78-8.9. Before the issuance of a permit for the alteration, repair or replacement of any part of an existing building or structure, the commissioner of buildings may require that the owner or his agent shall file with the said commissioner an affidavit stating the estimated cost of the proposed alteration, repair or replacement and the estimated cost of reproduction. Upon completion of the addition, alteration, repair or replacements covered by said permit, said commissioner may require that the owner or his agent shall file with said commissioner an affidavit stating the actual cost of alterations, repairs or replacements made under the permit.

78-9. Existing Assembly Units shall comply with the general requirements of section 78-8 and with the following special requirements:

(a) Any stage or projection block hereafter altered or remodeled shall be made to comply in its entirety with the provisions of this code.

(b) In Assembly Units having fixed seating, any alteration of the seating arrangement or of any means of exit shall be made to comply with the provisions of chapter 54, and any such alteration of seating shall require the compliance of all means of exit with the provisions of this code.

(c) No alteration or extension of any existing system of heating or refrigeration or any system of piping or machinery in which hazardous gases or liquids are contained, or which are prohibited in an Assembly Unit under this code, shall be made, unless all parts of such system and the rooms or spaces containing them shall be made to comply with the provisions of this code.

(d) Any room in an Assembly Unit hereafter converted for any use requiring special protection under this code shall be made to comply with the provisions of this code for such special protection.

78-10. [Repealed. Coun. J. 12-31-54, p. 9226.]

78-10.1. When permitted by the Chicago Zoning Ordinance, a pre-ordinance residential unit may be converted or altered so as to increase the number of units or persons to be accommodated and any building of mixed occupancy having business or mercantile units on the first floor may be converted into dwelling units provided that such buildings comply with the provisions of this section and with the applicable requirements of this code. If such buildings are increased in area, the new or added areas shall comply with all of the building provisions of the code.

(a) The said pre-ordinance building shall consist of not more than four stories and a basement or not more than fifty feet in height measured from grade to underside of roof sheathing. If the basement contains an apartment or apartments said basement shall be considered the first story.

(b) The total square foot area of any story above the first story shall not exceed thirty-eight hundred square feet, including stairhalls and corridors.

(c) The exterior walls of said pre-ordinance building shall be of construction providing fire resistance as required in chapter 49 of this code for ordinary construction, except that the requirements of this paragraph shall not apply to single family dwellings converted into residential units containing not more than two family units.

(d) Single family dwellings of either ordinary construction or combustible frame construction on a masonry foundation may be converted into dwellings containing not more than two living units, and where it is necessary to increase the area of the second floor of said building, the walls or dormers enclosing the added area may be of frame construction, provided that in single family dwellings of combustible frame construction so converted such enclosing wall or dormer wall shall in length not exceed fifty per cent of the length of the parallel wall in the story below.

(e) Combined residential occupancies and other use classifications shall comply with the requirements of section 48-12.5 pertaining to separation of occupancies.

78-10.2 Conversions and enlargement of residential structures as provided in the preceding section shall be subject to the following requirements:

(a) New or existing stairways shall be vertically separated from all other parts of the building with partitions providing fire resistance of not less than one hour.

(b) The floor construction over the basement shall be of construction providing fire resistance of not less than one-half hour.

(c) Furnace or other heating plants shall be separated from dwelling units by partitions providing fire resistance of not less than one-half hour.

(d) Existing walls or partitions may be altered or replaced with material allowed in the original structure except that partitions between dwellings and those enclosing stairs and public corridors shall comply with the requirements of section 52-2.

(e) Except where a single exit complying with all requirements of section 67-4 is permitted, each dwelling shall have access to two vertical means of exit. Existing stairs may be of wood. New stairs shall comply with the requirements of chapter 67.

(f) Stairways shall be enclosed as required in section 62-3. Soffits of stairs shall be protected as required in section 67-10.4.

78-10.3 [Repealed. Coun. J. 6-20-56, p. 2872.]

Housing Code

78-11. The purpose of this ordinance is to protect public health, safety, comfort, morals and welfare of the people of the city of Chicago, by enacting a housing code which establishes for all buildings used for housing:

(a) Minimum standards for cooking, heating and sanitary equipment necessary and expedient to promote health, suppress disease and protect safety of occupants of such buildings, and of neighboring properties;

(b) facilities for ventilation, light, space and means of egress which promote health and preserve safety;

(c) minimum standards of maintenance and responsibilities of owners, operators and occupants of dwellings for such maintenance which promote health and safety and aid in the enforcement of such standards;

(d) minimum standards essential to health, safety and welfare which are uniform in application to all dwellings whenever constructed so that with the resulting uniformity, simplicity and certainty, owners, operators and tenants are better able to determine the applicability of the law to them and the laws applicable to housing are administratively more convenient to enforce.

The city council finds that

(a) there exist in the city numerous dwellings which are substandard in one or more important features of structure, equipment, maintenance and occupancy;

(b) such conditions adversely affect public health and safety;

(c) such conditions contribute to the rapid deterioration and declining desirability of many residential areas of our city and tend to produce blight and slums;

(d) such conditions conflict with and destroy programs of this city under the Urban Community Conservation Act, as amended, and other acts of the state of Illinois designed to prevent slums and conserve residential areas;

(e) adequate protection of public health, safety, comfort and welfare and the maintenance of a workable program for prevention of slums and conservation of our city require the establishment and enforcement of minimum housing standards applicable to all dwelling units in this city;

(f) healthful and sanitary conditions in relation to space, use and arrangement of rooms generally prevail in single family dwellings occupied by an owner and his family.

78-11.1. Sections 78-11 through 78-20 of this chapter are referred to within said section as the housing code of the city of Chicago. This housing code is applicable to occupancy for residential purposes of any building, whether or not such building was erected, altered or converted in full or substantial compliance with ordinances in force at the time of its erection, alteration or conversion and whether or not such building was erected, altered or converted prior to the effective date of this housing code. Whenever any such ordinance imposes higher standards of health and safety than the standards imposed by this housing code, this housing code does not make a continued violation of such ordinance legal, nor does this housing code permit any building which complies with such ordinance to be altered or converted, as to either structure or occupancy, to conform to any lower standards imposed by this housing code. Every building constructed, altered or converted after the effective date of this housing code shall comply with the applicable provisions of the building provisions of this code in effect at such time, and such a building shall not be occupied for residential purposes, unless it complies also with any higher standards imposed by this chapter. The requirements imposed by this housing code shall be in addition to other applicable requirements for existing buildings imposed by other provisions of this chapter.

78-12. As used in sections 78-11 through 78-22 of this chapter:

(a) *Approved* means in accordance with this housing code and the regulations established by the commissioner of buildings under its authority.

(b) *Basement* means the portion of any building partly or wholly below grade.

(c) *Dwelling* means any building which is wholly or partly used or intended to be used for living or sleeping by human occupants.

(d) *Family Unit* means a room or group of rooms used or intended to be used as a housekeeping unit for living, sleeping, cooking and eating.

(e) *Habitable room* mean a room used or intended to be used for living, sleeping, eating or cooking purposes but does not include bathrooms, toilet rooms, laundries, pantries, foyers, corridors, storage spaces, stairways or closets.

(f) *Let* means to give another person the right to occupy any portion of a dwelling, family unit, or rooming unit. The act of "letting" shall be deemed to be continuing act for so long as the person given the right to occupy premises, continues to do so. A further "letting" by any occupant of a portion of a dwelling,

family unit, or rooming unit is for purpose of this chapter, also a "letting" by the owner or operator of the dwelling.

(g) *Owner* includes the owner, his agent for the purpose of managing, controlling or collecting rents, any other person managing or controlling a building or premises or any part thereof and any person entitled to the control or direction of the management or disposition of a building or premises or of any part thereof.

(h) *Rooming Unit* means any room or group of rooms forming a single habitable unit, used or intended to be used, for living and sleeping but not for cooking or eating purposes. A room occupied by a person who is permitted to prepare meals anywhere in a dwelling is a family unit and not a rooming unit unless it is an institutional unit as defined in section 48-3 of this code or in a convent, monastery, a bona fide not-for-profit club, or in a dormitory, fraternity or sorority affiliated with an educational or other charitable institution.

(i) *Rooming house* means any dwelling or that part thereof in which space is let by the owner, operator or occupant of one or more rooming units to three or more persons who are not husband or wife, son or daughter, mother or father, grandparents, grandchildren, sister or brother or niece or nephew of the owner or operator or tenant of the spouse of any of these, but any child lawfully under the care of any of the above members of a family shall not be deemed a roomer.

(j) *Supplied* means installed, furnished or provided by an owner or operator whether or not he charges tenants separately for a facility installed or furnished by him.

78-13. No person shall occupy as owner-occupant, nor shall any person let or hold out to another for occupancy, any dwelling or family unit which does not comply with the requirements of section 78-13.1 through 78-13.12 of this chapter.

78-13.1. Every family unit (except as provided in sections 78-13.4 and 78-13.9) shall contain within its walls a room, separate from the habitable rooms, which affords privacy and which is equipped with a flush water closet.

78-13.2. Every family unit (except as provided in sections 78-13.4 and 78-13.9) shall contain within its walls a lavatory basin located in the same room as the required water closet or as near to that room as practicable.

78-13.3. Every family unit (except as provided in sections 78-13.4 and 78-13.9) shall contain within its walls a room, separate from the habitable rooms, which affords privacy to a person in the room and which is equipped with a bathtub or shower.

78-13.4. The occupants of not more than two family units which are located in the same dwelling may share a single flush water closet, a single lavatory basin, and a single bathtub or shower if

(a) the facilities to be shared are within a room or rooms on the same floor as the family units and are accessible to the occupants of each family unit without going through the family unit of another person or outside the dwelling; and

(b) neither of the two family units contains more than two habitable rooms nor more than 500 square feet of floor area (excluding from the number of rooms and from floor area any kitchen of less than 70 square feet of floor area).

78-13.5. Every family unit shall contain within its walls a kitchen sink, except as otherwise permitted in section 78-13.9.

78-13.6. Every kitchen sink, lavatory basin and bathtub or shower required by this section shall be in good working condition and properly connected to an approved water and sewer system.

78-13.7 Every family unit shall have heating facilities which are capable of safely and adequately heating all habitable rooms, bathrooms and water closet compartments within its walls to a temperature of at least sixty-five degrees Fahrenheit when the outside temperature is ten degrees below zero Fahrenheit. Gas appliances designed primarily for cooking or water heating purposes shall not be considered as heating facilities within the meaning of this section. Portable heating equipment employing flame and the use of gasoline as a fuel does not meet the requirements of this section and is prohibited. The owner may require that the occupant shall provide the required heating

facilities at the occupant's expense but such agreement or requirement does not relieve the owner from responsibility for the presence of such heating equipment in the family unit.

78-13.8. Every family unit or rooming unit to which heat is furnished from a heating plant used in common for the purpose of heating the various rooms of the dwelling shall be supplied with heat from September fifteenth of each year to June first of the succeeding year so that the occupants of a family unit or rooming unit may secure, without such undue restriction of ventilation as to interfere with proper sanitary conditions, a minimum temperature of sixty degrees Fahrenheit at 6:30 a.m., sixty-five degrees at 7:30 a.m. and sixty-eight degrees at 8:30 a.m. and thereafter until 10:30 p.m., averaged throughout the family unit or rooming unit.

78-13.9. During a period of two years after the effective date of this housing code

(a) a kitchen sink may be shared by the occupants of not more than three family units on any one floor, if the occupants of each sharing unit have access to such sink without passing through any part of any other family unit or outside the dwelling; and

(b) single flush-water closet, a single lavatory basin and a single bathtub or shower may be shared by the occupants of not more than four family units if each such family unit has only one habitable room (not counting a kitchen of less than seventy square feet of floor area) and if the shared facilities are on the same floor as the family units and if the occupants of each unit have access to such shared facilities without passing through any other family unit or outside the dwelling.

78-13.10. Every kitchen sink, lavatory and bathtub or shower required shall be connected with cold water lines, and after a period of five years from the effective date of this section, with hot water lines. The hot water lines shall be connected with water heating facilities which are capable of heating water to such a temperature as to permit water to be drawn at every required outlet at a temperature of not less than one hundred and twenty degrees Fahrenheit even when the heating facilities required by this code are not in operation.

78-13.11. Every family unit or rooming unit to which hot water is furnished from water heating facilities used in common shall be supplied with hot water throughout the year so that the occupants may draw water at every hot water outlet between the hours of 6:00 a.m. and 10:30 p.m. of a minimum temperature of one hundred and twenty degrees Fahrenheit.

78-13.12. All gas-fired heating, cooking and other appliances and gas-fired water heaters, shall conform to the requirements in sections 63-11 through 63-11.5 and 80-10 and 80-24.7 of the building provisions of this code concerning installation, vents and flues.

78-14. No person shall occupy as owner-occupant, or shall let or hold out to another for occupancy, any dwelling or family unit which does not comply with the requirements of section 78-14.1 through 78-14.7 of this chapter.

78-14.1. All habitable rooms other than a kitchen must be provided with a means for transmitting natural light from outside complying with the following requirements:

(a) The area required for transmitting light from the outside shall be computed on the basis of clear glass measured as to the nominal glass dimensions. A material other than clear glass may be used but the required area then shall be that necessary to provide the equivalent of clear glass lighting.

(b) The required clear glass area shall be not less than one-twelfth of the floor area of such room and not less than ten square feet. The effective area shall be computed at not more than eighty per cent of the actual area when a required natural light area

(1) faces a wall or other obstruction at a distance of less than ten feet; or

(2) is located below a roof or other obstruction projecting more than four feet from the face of the window or other natural light area and the

plane from the head to the outside of such projection forms an angle with the horizontal of less than forty-five degrees.

(c) Whenever a habitable room has natural light area opening from the room to an enclosed porch, such area shall not be counted as a required light area unless the enclosed porch has a natural light area of not less than three times the required light area opening from the room to the porch.

78-14.2. Every habitable room shall have a ventilation system adequate for the purpose for which the room is used. Natural ventilation shall be deemed to be adequate for habitable rooms when the total area openable to the outside air (by means of windows, louvers, monitors, or other direct openings excluding doors) is 5% of the floor area of the habitable room, except that when

(a) any portion of the room is more than sixteen feet from a required opening, the aggregate clear area of openings shall be not less than 6% ;

(b) a room has openable areas on two or more sides thereof, the total openable area shall be at least 4% of the total floor area of such room ;

(c) the openable area faces a wall or other obstruction at a distance of less than ten feet, the effective area shall be computed at not more than 80% of the actual openable area ;

(d) the openable area opens onto an enclosed porch, the enclosed porch shall have an openable area of at least three times the total required area of the openings onto such porch.

78-14.3. Mechanical or gravity ventilation shall be deemed to be adequate if it is a system of ventilation complying with the requirements of chapter 81 of this code.

78-14.4.' A kitchen with a floor area of less than seventy square feet may be without either mechanical or natural ventilation if there is an opening of not less than thirty-two square feet between the kitchen and another room in the same family unit and if the room into which the kitchen opens has the ventilation requirements of the preceding sections.

78-14.5. Every toilet room and bathroom shall have adequate ventilation which may be either an openable window with an openable area of 5% of the floor area, mechanical ventilation complying with the requirements of chapter 81, or a gravity vent flue constructed with incombustible material leading to the roof of the building or a combination of any of these. The gravity vent shall be computed at an aggregate clear area of not less than five per cent of the floor area of the room, with a minimum area of at least 120 square inches. Gravity vents shall be provided with a weather cap, directional vane or rotary type ventilation on roof.

78-14.6. Every public hall and stairway in every dwelling having more than one family unit shall be adequately lighted at all times, except than in a two-family dwelling an adequate lighting system which may be turned on when needed by conveniently located light switches shall be permitted instead of a full-time lighting system. Lighting shall be considered adequate if through windows or electric lights there is sufficient lighting to provide illumination of at least one-foot candle on every part of the hall or stairway at all times of day and night.

78-15. No person shall occupy as an owner-occupant, or shall let or hold out to another for occupancy any dwelling, family unit or rooming unit which does not comply with the requirements of section 78-15.1 through 78-15.9 of this chapter.

78-15.1. Every family unit and rooming unit shall have safe, unobstructed means of egress leading to safe and open space at ground level.

78-15.2. In buildings constructed prior to the effective date of chapter 67, to-wit: prior to December 30, 1949, every building shall have not less than the minimum number of exits required by section 67-4 but in such buildings

(a) fire escape stairways complying with section 67-16 may be used in lieu of not more than 50% of required stairs ;

(b) a balcony having an area of not less than 18 square feet and provided with a ladder of non-combustible materials extending to the ground may be used in lieu of one of two required stairways for a dwelling unit having a floor level not more than 15 feet above grade;

(c) an exit may be counted as a second required exit from a building even though access to such exit is through another family unit if the requirements of section 78-15.3 are met.

78-15.3. A family unit or rooming unit which has an exit to a corridor or hall may count as its second required exit from the dwelling (if a second exit is required by section 67-4) a stairway or other approved exit access to which is available only by passing through another family unit if;

(a) access to such second exit in the other family unit is by means of an unobstructed glass panel door which may be unlocked on the second exit side without the use of a key and which glass panel is at least five feet high and twenty inches above the floor and is of a thickness not greater than double-strength American window glass; and if

(b) such glass panel door gives access to the second exit by passing through not more than one other family unit; there shall not be any door or other obstruction in the line of travel from a glass panel except the door or window at the exit which shall be readily openable without the use of a key from the inside; and if

(c) not more than 1,000 square feet of habitable rooms in family units or rooming units count this glass panel door as a means of access to an exit.

78-15.4. In existing buildings where exits do not comply with the requirements of chapter 67 and in which hazardous conditions exist because of the number, width, construction, or location of exits, the commissioner of buildings may order additional or rearrangement of existing exits to assure adequate safety of the occupants.

78-15.5. Every door which closes an exit of the type permitted by section 78-15.3 shall be capable of being opened from the inside, easily and without the use of a key.

78-15.6. There shall be no closets or storage of any kind beneath stairways in any dwelling containing two or more family units or in any rooming house unless the stair complies with the fire resistive requirements of sections 62-3 to 62-3.6 inclusive or unless the stairs and storage space are separated by non-combustible materials having a fire rating of not less than one hour. No combustible or flammable materials, fluids, or compounds shall be placed, stored or kept in any place inside or outside of any building where the ignition or burning of such materials, fluids, or compounds would obstruct or render hazardous the egress from any family unit or from the building.

78-15.7. Every hallway, corridor, stairway, exit, fire escape door, and other means of egress shall be kept clear and unencumbered at all times, and every exit area shall be adequately lighted by electricity, in accordance with sections 67-17 and 67-17.1 of this code.

78-15.8. Exit, stairway, fire escape and directional signs shall be properly installed and maintained in accordance with sections 67-18 to 67-18.5 inclusive of this code.

78-15.9. (a) *Construction of glass panels prohibited.* After July 1, 1956, no permit shall issue for the construction of and no person shall construct any glass panel as a means of access to a required exit when it is necessary to pass from such panel through another family or rooming unit in any building to be occupied for residential purposes.

(b) *Glass panel exits prohibited after 5 years.* Five years after the effective date of this housing code, no exit in any building may be counted as a required exit for a family unit unless every family unit for which it is an exit has access to such exit without passing through any other family or rooming unit.

78-16. No person shall occupy or cause or permit the continued occupancy of any family unit which does not comply with the standards for occupancy set

forth in sections 78-16.1 through 78-16.5 of this chapter. If any occupancy in violation of this section shall exist, a landlord shall be deemed to have permitted it if the rental or lease agreement does not prohibit occupancy in violation of this section, provided that such presumption shall not apply to any landlord or lessor as to any occupancy effected by or continuing under any agreement made prior to the date of enactment of this housing code but shall apply to any landlord or lessor as to any occupancy effected by any agreement made after such date, including any renewal or extension after such date of any earlier agreement. The provisions of this section shall apply to all tenants, lessees or other person in occupancy even though they may not be applicable to the landlord under the provisions of the preceding sentence or otherwise.

The provisions of sections 78-16.1 to 78-16.4 inclusive shall not be applicable to single-family dwellings occupied only by an owner and persons within the family relationship described in paragraph (i) of section 78-12 of this chapter.

78-16.1. Every family unit shall contain at least one hundred and twenty-five square feet of floor area for each of the first two occupants and at least one hundred square feet for each of the next two occupants and at least seventy-five square feet for each additional occupant. For the purpose of this section floor area is the area within the perimeter of the space or building occupied by the family unit not including elevators, stairs, or other shaft enclosures.

78-16.2. In every family unit and every rooming unit, every room occupied for sleeping purposes by one occupant shall contain at least seventy square feet of floor area and every room occupied for sleeping purposes by more than one occupant shall contain at least fifty square feet of floor area for each occupant twelve years of age and over and at least thirty-five square feet of floor area for each occupant under twelve years of age. For the purpose of this section a person under two years of age shall not be counted as an occupant.

78-16.3. Every room used exclusively as a bedroom shall have access to at least one water closet without passing through another room used exclusively as a bedroom.

78-16.4. At least one half of the floor area of every habitable room shall have a ceiling height of at least seven feet; and the floor area of that part of any room where the ceiling is less than five feet shall not be considered as part of the floor area in computing the total floor area of the room for the purpose of determining the maximum permissible occupancy thereof.

78-16.5. No basement space shall be used as a habitable room or family unit unless

(a) the floors and walls are impervious to leakage of underground and surface run-off water and are insulated against dampness;

(b) the required minimum window area is located entirely above the finished elevation of the ground adjoining the building wall in which the windows are located; and

(c) the habitable room or family unit meets the other requirements of this chapter.

78-17. No person shall occupy as owner-occupant or shall let or hold out to another for occupancy any dwelling or family unit, for the purpose of living therein, which is not safe, clean, sanitary, and fit for human occupancy, and which does not comply with the particular requirements of sections 78-17.1 through 78-17.8 of this chapter.

78-17.1. The foundation, exterior walls, and exterior roof shall be substantially water-tight and protected against rodents, and shall be kept in sound condition and repair.

(a) The foundation elements shall adequately support the building at all points.

(b) Every exterior wall shall be free of holes, breaks, loose or rotting boards or timbers, and any other conditions which might admit rain, or dampness to the interior portions of the walls or to the exterior spaces of the dwelling.

(c) The roof shall be tight and have no defects which admit rain and roof drainage shall be adequate to prevent rain water from causing dampness in the walls.

(d) The dwelling shall be in a rat-stopped condition in accordance with sections 99-61.1 through 99-61.9 of this code, and shall be adequately protected against the entry of other rodents.

(e) All cornices, rustications, quoins, moldings, belt courses, lintels, sills, oriel windows, pediments and similar projections shall be kept in good repair and free from cracks and defects which make them hazardous and dangerous.

78-17.2. Every floor, interior wall, and ceiling shall be adequately protected against the passage of rodents, and shall be kept in sound condition and good repair.

(a) Every floor shall be free of holes and wide cracks which might admit rodents or which constitute a possible accident hazard.

(b) Every floor shall be free of loose, warped, protruding, or rotting floor boards.

(c) Every interior wall and ceiling shall be free of holes and large cracks.

(d) Every interior wall and ceiling shall be free of loose plaster or other structural material, the collapse of which might constitute an accident hazard.

(e) Plaster, paint, and all other surface materials shall be of such character as to be easily cleanable, and are reasonably smooth, clean and tight.

(f) Every toilet room and bathroom floor surface shall be substantially impervious to water and be capable of being maintained easily in a clean and sanitary condition.

78-17.3. Every window, exterior door, and basement hatchway shall be substantially tight, and shall be kept in sound condition and repair.

(a) Every window shall be fully supplied with window panes which are without open cracks or holes.

(b) Every window sash shall be in good condition and fit reasonably tight within its frame.

(c) Every window, other than a fixed window, shall be capable of being easily opened and shall be held in position by window hardware.

(d) Every exterior door, door hinge, and door latch shall be in good condition.

(e) Every exterior door, when closed, shall fit reasonably well within its frame.

(f) Every window, door, and frame shall be constructed and maintained in such relation to the adjacent wall construction as completely to exclude rain, and substantially to exclude wind from entering the dwelling.

(g) Every basement hatchway shall be so constructed and maintained as to prevent the entrance of rodents, rain, and surface drainage water into the dwelling.

(h) Every door available as an exit as required by section 78-15.5 of this chapter shall be capable of being opened from the inside, easily and without the use of a key.

78-17.4. Screens shall be supplied to the following extent:

(a) Every basement or cellar window which is openable shall be supplied with a heavy wire screen or hardware cloth of not less than 4 mesh per inch which fits tightly and is securely fastened to the frame, or with any other material affording equivalent protection against the entry of rodents.

(b) From April 15 to November 15 of each year, every door opening directly from any family unit to the outdoors, and every window or other outside opening used for ventilation purposes, shall be supplied with a screen of not less than 16 mesh per inch and every screen door shall have a self-closing device in good working condition. However, no such screens shall be required for a family unit on a floor above the fourth floor, unless required by the department of buildings when unusual circumstances of insect prevalence exist.

78-17.5. Every stairway, inside or outside of the dwelling, and every porch, shall be kept in safe condition and sound repair.

(a) Every flight of stairs and every porch floor shall be free of holes, grooves, and cracks, which are large enough to constitute possible accident hazards.

(b) Every stairwell and every flight of stairs, which is more than two risers high, shall have rails not less than two and one half feet high, measured vertically from the nose of the tread to the top of the rail; and every porch which is more than two risers high shall have rails not less than three and one half feet above the floor of the porch.

(c) Every rail and balustrade is firmly fastened and is maintained in good condition.

(d) No flight of stairs shall have settled more than one inch out of its intended position or have pulled away from supporting or adjacent structures.

(e) No flight of stairs shall have rotting, loose, or deteriorating supports.

(f) The riser height and the tread width of each flight of stairs shall be uniform.

(g) Every stair tread shall be sound and be securely fastened in a substantially level position.

(h) Every stair tread shall be strong enough to bear a concentrated load of at least four hundred pounds without danger of breaking.

(i) Every porch shall have a sound floor.

(j) No porch shall have rotting, loose, or deteriorating supports.

[Amend. Coun. J. 11-7-58, p. 8380.]

78-17.6. Every basement and every cellar shall be maintained in a safe and sanitary condition.

(a) Water shall not be permitted to accumulate or stand on the floor.

(b) All sewer connections shall be properly trapped.

(c) All cellar and slab drains shall be covered with grating.

(d) Junk, rubbish, and waste shall not be permitted to accumulate to such an extent as to create fire hazards or to endanger health or safety.

78-17.7. Every supplied facility, piece of equipment, or utility, and every chimney and chimney flue, shall be installed and maintained in a safe and sound working condition.

78-17.8. Every yard, court, vent, passageway, and other portion of the lot on which the dwelling stands, shall be graded and drained so as to prevent the accumulation of stagnant water on any such surface.

78-18. In addition to other applicable provisions of this housing code, owners and occupants shall comply with the respective responsibilities imposed upon them by sections 78-18.1 through 78-18.3 of this chapter.

78-18.1. Every occupant of a family unit must

(a) keep that part of the family unit which he occupies and controls in a clean, sanitary and safe condition;

(b) keep all plumbing and other fixtures required by this chapter, whether or not supplied by the landlord, in a clean and sanitary condition, and if supplied by the landlord, must use reasonable care in the proper use and operation thereof;

(c) if his family unit is one through which another family unit has a required means of exit as provided in section 78-15.3, keep such means of egress clear and unencumbered at all times;

(d) if a single family dwelling unit, exterminate any insects, rodents or other pests therein or on the premises, and if a family unit in a dwelling containing more than one family exterminate such insects, pests, and rodents whenever his family unit is the only one in the dwelling infested, except as provided in section 78-18.2(c);

(e) dispose of all garbage and other refuse only in the containers required by section 99-16 of the code and must place such refuse in the containers in a clean and sanitary manner;

(f) hang and remove all screens required for his family unit by this chapter unless the owner has agreed to supply such service;

(g) not place on the premises any material which causes a fire hazard or otherwise endangers the health or safety of any occupant of such dwelling nor place in storage on the premises any furniture, equipment, or material which harbors insects, rodents, or other pests;

(h) not permit any family unit let to him to be occupied so that any occupancy resulting therefrom violates any of the provisions of this chapter;

(i) provide heating facilities for that part of the family unit he occupies unless such facilities are provided by the owner. Gas appliances designed to be used primarily for cooking or water heating purposes shall not be considered as heating facilities within the meaning of this section.

78-18.2. Every owner or operator must

(a) comply with the requirements imposed on him by this chapter;

(b) maintain in a clean, sanitary and safe condition the shared or public areas of the dwelling or premises, and maintain and repair any equipment of a type specified in this code which he supplies or is required to supply;

(c) exterminate any insects, rodents or other pests in any family unit if infestation is caused by the failure of the owner or operator to maintain the dwelling in a ratproof or reasonably insect-proof condition and he must exterminate such pests in any family unit in the dwelling, regardless of the cause of infestation if infestation exists in two or more of the family units in the dwelling or in the shared or public parts of any dwelling containing two or more family units; and

(d) supply and maintain the facilities for refuse disposal which are required of him by section 99-16.

78-18.3. An owner remains liable to the city for violation of duties imposed upon him by this chapter even though

(a) an obligation is also imposed on the occupant by this chapter; or

(b) the owner has by agreement imposed on the occupant the duty of furnishing required equipment or of complying with this chapter.

78-19. No person shall operate a rooming house or let to another for occupancy any rooming unit unless such rooming unit complies with the minimum standards set forth in sections 78-19.1 through 78-19.4 of this chapter.

78-19.1. Every rooming house and every rooming unit shall be in compliance with the minimum standards for family units set forth in this chapter, in

(a) sections 78-13.7 and 78-13.8 on minimum standards for heating;

(b) sections 78-13.10 and 78-13.11 on minimum standards for hot and cold water lines, water heating facilities, and continuation of service;

(c) section 78-14 on minimum standards for light and ventilation;

(d) section 78-15 on minimum exit requirements and standards;

(e) section 78-16 on space, use and location, except for the provision of section 78-16.1; and

(f) section 78-17 on minimum standards for safe and sanitary maintenance.

78-19.2. At least one flush water closet, lavatory basin and bathtub or shower shall be supplied for each ten persons or fraction of ten within a rooming house, including members of the family of the owner if they share the use of the facilities.

All such facilities shall be properly connected to required water and sewerage systems and shall be located within the dwelling so as to be reasonably accessible from a common hall or passageway to all persons sharing such facilities, and shall not be more than one story removed from the rooming unit of any occupant intended to share the facilities. In a rooming house in which rooms are let only to males, flush urinals may be substituted for not more than thirty-three and one third per cent of the required number of water closets. In a rooming house where both sexes are accommodated, the water closets shall be separately calculated based on the occupancy of each sex and shall be in compartments separated for use of each sex, except where not more than two water closets are required.

78-19.3. Every operator of a rooming house shall be responsible for the following matters required by this chapter: extermination of insects, rodents, or other pests in it or in its yard; disposal of refuse by placing it in disposal facilities supplied by him; hanging and removing all screens required; sanitary maintenance of all walls, floors and ceilings; maintenance of a sanitary condition in every part of the rooming house; and proper installation and repair of every facility.

78-20. The administration and enforcement of this chapter and the penalty for violating, resisting or opposing the enforcement of this chapter shall be in accordance with the provisions of chapters 13, 39 and 41 of this code.

CHAPTER 78.1

MEN'S CUBICLE HOTELS

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|------------------------------|--|
| 78.1-1. Definitions | 78.1-5. Sanitary facilities |
| 78.1-2. Compliance | 78.1-6. Fire extinguishing apparatus |
| 78.1-3. General requirements | 78.1-7. Administration and enforcement |
| 78.1-4. Space requirements | |

78.1-1. Men's cubicle hotels shall include all lodging houses exclusively maintained for men, containing sleeping stalls the separating partitions of which do not reach the ceiling. [Passed. Coun. J. 5-8-57, p. 4969.]

78.1-2. Every existing building, structure or part thereof and every building hereafter erected, as herein defined, shall comply with the requirements of this chapter. [Passed. Coun. J. 5-8-57, p. 4969.]

78.1-3. All lodging houses falling within this classification shall conform with all the provisions of this code except the following:

Sections, 78-16.2; 78-19.2; 81-7; as applied to sleeping stalls; 52-2(a). [Passed. Coun. J. 5-8-57, p. 4969.]

78.1-4. The number of occupants for sleeping purposes permitted on a floor in lodging houses falling within this classification shall be computed by ascertaining the number of total square feet from wall to wall of a floor area so occupied and dividing this number by fifty. [Passed Coun. J. 5-8-57. p. 4969.]

78.1-5. At least one flush water closet, lavatory basin and bath tub, or shower, shall be supplied for each twenty persons, or fraction of each additional twenty within a lodging house falling under this classification. Flush urinals may be substituted for not more than 33 $\frac{1}{3}$ % of required number of water closets.

All such facilities shall be properly connected to required water and sewer systems, and shall be located within the dwelling so as to be reasonably accessible from a common hall or passage, to all persons sharing such facilities and shall not be more than one story removed from the rooming unit of any occupant intended to share the facilities. [Passed. Coun. J. 5-8-57, p. 4969; amend. 9-19-57, p. 5999.]

78.1-6. All men's cubicle hotels, as herein defined, shall comply in all respects with the provisions of section 64-1.2(g). [Passed. Coun. J. 5-8-57, p. 4969.]

78.1-7. The administration and enforcement of this chapter and the penalty for violating, resisting or opposing the enforcement of this chapter, shall be in accordance with the provisions of chapters 13, 39 and 41 of this code. [Passed. Coun. J. 5-8-57, p. 4969.]

CHAPTER 89

FIRE LIMITS*

89-1. Building restrictions
89-2. Fire limits defined

89-3. Provisional fire limits defined
89-4. Fire limits maps

89-1. No building, structure, shed or enclosure of wood frame construction shall be erected inside the fire limits or provisional fire limits, except as provided in section 67-59 in the building provisions of this code.

Within the provisional fire limits of the city it shall be lawful to erect a building of wood frame construction to be used for residence or mercantile purposes upon approval by the commissioner of buildings of a petition presented together with a plat, plans, and specifications showing the space where such building is to be erected. Such petition shall be verified by the affidavit of the applicant and shall contain the written consent of the owners of a majority of the frontage upon both sides of the streets surrounding the square in which the proposed building is to be erected. No such petition shall be required, however, for the erection within the provisional fire limits of frame buildings of the type permitted by section 47-4 in the building provisions of this code.

No residence or mercantile building of wood frame construction shall be erected within the provisional fire limits exceeding thirty feet in height. [Amend. Coun. J. 2-27-45, p. 3076.]

89-2. The territory embraced within the fire limits of the city shall be all the territory within the corporate limits of the city with the following exceptions:

(a) All that territory bounded on the west by the east line of the Chicago and Northwestern railway, on the south by the center line of W. Devon avenue, on the east by Lake Michigan, on the north by the city limits.

(b) All that territory bounded on the west by the center line of N. Cicero avenue, on the south by the center line of the north branch of the Chicago river, on the east by the center line of N. Pulaski road, and on the north by the center line of W. Devon avenue.

(d) All that territory bounded on the west by a line one hundred and twenty-five feet east of the east line of N. Western avenue, on the southwest by a line one hundred and twenty-five feet northeasterly of the northeasterly line of N. Lincoln avenue, on the south by a line one hundred and twenty-five feet north of the north line of W. Lawrence avenue, on the east by the center line of N. Leavitt street, and on the north by a line one hundred and twenty-five feet south of the south line of W. Foster avenue.

(e) All that territory described as follows: beginning at the intersection of the center line of the north branch of the Chicago river, and the center line of W. Berteau avenue; thence southerly and easterly along the center line of the north branch of the Chicago river, to the center line of W. Fullerton avenue; thence east along the center line of W. Fullerton avenue, to the center line of N. Southport avenue; thence north along the center line of N. Southport avenue to the center line of W. Belmont avenue; thence west along the center line of W. Belmont avenue to the center line of N. Western avenue; thence north along the center line of N. Western avenue to the center line of W. Addison street; thence west along the center line of W. Addison street to a line one hundred and twenty-five feet west of the west line of N. Western avenue; thence north along said line one hundred and twenty-five feet west of the west line of N. Western avenue, to the center line of W. Berteau avenue, thence west along the center line of W. Berteau avenue to the point of beginning.

(f) All that territory described as follows: beginning at the intersection of the center lines of N. Kedzie avenue and W. Addison street; thence west along the center line of W. Addison street to a line one hundred and twenty-five feet east of the east line of N. Cicero avenue; thence south along said line one hundred and twenty-five feet east of the east line of N. Cicero avenue to a line one hundred and twenty-five feet north of the north line of W. Diversey avenue; thence east along said line one hundred and twenty-five feet north of the north line of W. Diversey avenue to a line one hundred and twenty-five feet west of the

*See ordinance passed Coun. J. 5-G-46, p. 5691 for emergency housing provisions.

west line of N. Kostner avenue; thence north along said line one hundred and twenty-five feet west of the west line of N. Kostner avenue to a line one hundred and twenty-five feet north of the north line of W. Belmont avenue; thence east along said line one hundred and twenty-five feet north of the north line of W. Belmont avenue to the center line of N. Kedzie avenue; thence north along the center line of N. Kedzie avenue to the point of beginning.

(g) All that territory described as follows: beginning at the intersection of the center line of N. Kedzie avenue and W. Diversey avenue; thence north along the center line of N. Kedzie avenue, to a line one hundred and twenty-five feet south of the south line of W. Belmont avenue; thence west along said line one hundred and twenty-five feet south of the south line of W. Belmont avenue to the center line of N. Pulaski road; thence south along the center line of N. Pulaski road to the center line of W. Fullerton avenue; thence east along the center line of W. Fullerton avenue to the center line of N. Central Park avenue; thence north along the center line of N. Central Park avenue to the center line of W. Diversey avenue; thence east along the center line of W. Diversey avenue to the point of beginning.

(h) All that territory described as follows: beginning at the intersection of the center line of W. Fullerton avenue and a line one hundred and twenty-five feet west of the west line of N. Cicero avenue; thence north along said line one hundred and twenty-five feet west of the west line of N. Cicero avenue to a line one hundred and twenty-five feet south of the south line of W. Diversey avenue; thence west along said line one hundred and twenty-five feet south of the south line of W. Diversey avenue to the center line of N. Harlem avenue; thence south along the center line of N. Harlem avenue to the center line of W. Wrightwood avenue; thence east along the center line of W. Wrightwood avenue to the center line of N. Narragansett avenue; thence south along the center line of N. Narragansett avenue, to the center line of W. Fullerton avenue, thence east along the center line of W. Fullerton avenue to the point of beginning.

(i) [Repealed. Coun. J. 11-10-44, p. 2464.]

(j) All that territory described as follows: beginning at the intersection of S. Western avenue boulevard and the center line of the Illinois and Michigan canal; thence southwesterly along the center line of the Illinois and Michigan canal to the center line of W. Pershing road extended west; thence west along the center line of W. Pershing road extended west to the center line of S. La Crosse avenue extended north; thence south along the center line of S. La Crosse avenue extended north to the southeasterly line of the Chicago and Alton railroad right-of-way; thence southwesterly along said southeasterly line of the Chicago and Alton railroad right-of-way to the center line of S. Laramie avenue; thence south along the center line of S. Laramie avenue to the center line of W. Fifty-first street; thence east along the center line of W. Fifty-first street to the center line of S. Cicero avenue; thence north along the center line of S. Cicero avenue, to the center line of W. Forty-fifth street; thence east along the center line of W. Forty-fifth street and W. Forty-fifth street extended, to the center line of S. Western avenue boulevard; thence south along the center line of S. Western avenue boulevard, to the center line of W. Forty-ninth street; thence east along the center line of W. Forty-ninth street to the center line of S. Loomis street; thence south along the center line of S. Loomis street to the center line of W. Garfield boulevard; thence east along the center line of W. Garfield boulevard, to the center line of S. Racine avenue; thence north along the center line of S. Racine avenue, to the center line of W. Fifty-first street; thence east along the center line of W. Fifty-first street to a line one hundred and twenty-five feet west of the west line of S. Halsted street; thence north along said line one hundred and twenty-five feet west of the west line of S. Halsted street, to the center line of W. Forty-seventh street; thence west along the center line of W. Forty-seventh street, to the center line of S. Ashland avenue; thence north along the center line of S. Ashland avenue to the center line of W. Forty-third street; thence east along the center line of W. Forty-third street, to a line one hundred and twenty-five feet east of the east line of S. Ashland avenue; thence north along said line one hundred and twenty-five feet east of the east line of S. Ashland avenue to the center line of W. Fortieth street; thence west along the center line of W. Fortieth street to the center line of S. Ashland avenue; thence south along the center line of S. Ashland avenue to the center line of W. Forty-first street; thence west

along the center line of W. Forty-first street to a line one hundred and twenty-five feet west of the west line of S. Ashland avenue; thence south along said line one hundred and twenty-five feet west of the west line of S. Ashland avenue to the center line of W. Forty-third street; thence west along the center line of W. Forty-third street to the center line of S. Damen avenue extended north; thence north along the center line of S. Damen avenue extended north to the center line of W. Pershing road; thence west along the center line of W. Pershing road to the center line of S. Western avenue boulevard; thence north along the center line of S. Western avenue boulevard to the point of beginning.

(k) All that territory bounded on the north by W. Fifty-second street, on the south by W. Fifty-third street, on the west by S. Morgan street, and on the east by S. Peoria street.

(l) All that territory described as follows: beginning at the intersection of the center line of S. Normal avenue and the center line of W. Fortieth street (Chicago Junction railway); thence west along the center line of W. Fortieth street (Chicago Junction railway) to the center line of S. Wallace street; thence south along the center line of S. Wallace street to the center line of W. Forty-third street; thence west along the center line of W. Forty-third street to a line one hundred and twenty-five feet east of the east line of S. Halsted street; thence south along said line one hundred and twenty-five feet east of the east line of S. Halsted street, to the center line of W. Fifty-first street; thence east along the center line of W. Fifty-first street to the center line of S. Union avenue; thence south along the center line of S. Union avenue to the center line of W. Garfield boulevard; thence east along the center line of W. Garfield boulevard to a line one hundred and twenty-five feet west of the west line of S. Wentworth avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Wentworth avenue, to the center line of W. Forty-third street; thence west along the center line of W. Forty-third street to the center line of S. Normal avenue; thence north along the center line of S. Normal avenue to the point of beginning.

(m) All that territory bounded on the north by the center line of W. Forty-third street, on the south by the center line of W. Garfield boulevard, on the west by a line one hundred and twenty-five feet east of the east line of S. Wentworth avenue, and on the east by a line one hundred and twenty-five feet west of the west line of S. State street.

(n) All that territory described as follows: beginning at the intersection of a line one hundred and twenty-five feet south of the south line of W. Sixty-third street and the center line of S. Racine avenue; thence west along said line one hundred and twenty-five feet south of the south line of W. Sixty-third street, to the center line of Loomis street boulevard; thence south along the center line of Loomis street boulevard, to the center line of W. Sixty-sixth street; thence west along the center line of W. Sixty-sixth street, to the center line of S. Wood street; thence south along the center line of S. Wood street to the center line of W. Sixty-ninth street; thence west along the center line of W. Sixty-ninth street to the center line of S. Damen avenue; thence south along the center line of S. Damen avenue to the center line of W. Seventy-fifth street (Belt railway); thence east along the center line of W. Seventy-fifth street (Belt railway), to a line one hundred and twenty-five feet west of the west line of S. Ashland avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Ashland avenue, to the center line of W. Seventy-first street; thence east along the center line of W. Seventy-first street, to a line one hundred and twenty-five feet east of the east line of S. Ashland avenue; thence south along said line one hundred and twenty-five feet east of the east line of S. Ashland avenue, to the center line of W. Seventy-fifth street (Belt railway); thence east along the center line of W. Seventy-fifth street (Belt railway) to the center line of S. Racine avenue, thence north along the center line of S. Racine avenue, to the point of beginning.

(o) All that territory bounded on the northeast by the northeasterly line of the right-of-way of the New York Central railroad (Lake Shore and Michigan Southern railway), on the west by the center line of S. State street, on the south by the center line of W. Marquette road.

(p) [Repealed. Coun. J. 7-8-49, p. 4532.]

(q) All that territory described as follows: beginning at the intersection of the center line of W. Ninetieth street and S. State street; thence west along the center line of W. Ninetieth street, to the center line of S. Wentworth avenue; thence south along the center line of S. Wentworth avenue to a line one hundred and twenty-five feet north of the north line of W. Ninety-fifth street; thence west along said line one hundred and twenty-five feet north of the north line of W. Ninety-fifth street, to a line one hundred and twenty-five feet east of the east line of S. Stewart avenue (Chicago and Western Indiana railroad); thence north along said line one hundred and twenty-five feet east of the east line of S. Stewart avenue (Chicago and Western Indiana railroad), to a line one hundred and twenty-five feet south of the south line of W. Eighty-third street; thence west along said line one hundred and twenty-five feet south of the south line of W. Eighty-third street, to the center line of S. Eggleston avenue extended north; thence south along the center line of S. Eggleston avenue extended north, and S. Eggleston avenue, to the center line of W. Ninety-ninth street; thence east along the center line of W. Ninety-ninth street to the center line of S. Princeton avenue; thence south along the center line of S. Princeton avenue to a line one hundred and twenty-five feet north of the north line of W. One hundred and second street; thence west along said line one hundred and twenty-five feet north of the north line of W. One hundred and second street, to the east line of the Chicago and Western Indiana railroad; thence south along the east line of the Chicago and Western Indiana railroad, to a line one hundred and twenty-five feet south of the south line of W. One hundred and second street; thence east along said line one hundred and twenty-five feet south of the south line of W. One hundred and second street, to the center line of S. Princeton avenue; thence south along the center line of S. Princeton avenue, to a line one hundred and twenty-five feet north of the north line of W. One hundred and third street; thence east along said line one hundred and twenty-five feet north of the north line of W. One hundred and third street, to a line one hundred and twenty-five feet west of the west line of S. Michigan avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Michigan avenue, to a line one hundred and twenty-five feet south of the south line of E. and W. Ninety-ninth street; thence west along said line one hundred and twenty-five feet south of the south line of E. and W. Ninety-ninth street to a line one hundred and twenty-five feet west of the west line of S. State street; thence north along said line one hundred and twenty-five feet west of the west line of S. State street, to the center line of W. Ninety-fifth street; thence east along the center line of W. Ninety-fifth street to the center line of S. State street; thence north along the center line of S. State street to the point of beginning. Excluding, however, from the exception embraced in this paragraph the territory bounded on the north by the center line of W. Ninety-sixth street, on the south by the center line of W. Ninety-seventh street, on the west by a line one hundred and twenty-five feet west of the west line of S. Yale avenue, and on the east by a line one hundred and twenty-five feet east of the east line of S. Yale avenue.

(r) All that territory bounded on the north by the center line of W. One hundred and seventeenth street, on the south by the center line of W. One hundred and eighteenth street, on the west by a line one hundred and twenty-five feet west of the west line of S. Peoria street, and on the east by a line one hundred and twenty-five feet east of the east line of S. Peoria street.

(s) All that territory bounded on the north by a line one hundred and twenty-five feet south of the south line of E. One hundred and third street, on the south by a line one hundred and twenty-five feet north of the north line of E. One hundred and seventh street, on the west by a line one hundred and twenty-five feet east of the east line of S. Michigan avenue, and on the east by the center line of S. Indiana avenue.

(t) All that territory bounded on the north by a line one hundred and twenty-five feet south of the south line of W. One hundred and third street, or the south by the center line of W. One hundred and eleventh street, on the west

by the center line of S. Stewart avenue (Chicago and Western Indiana railroad), and on the east by a line one hundred and twenty-five feet west of the west line of S. Wentworth avenue; also that territory bounded on the north by the center line of W. One hundred and eleventh street, on the south by a line one hundred and twenty-five feet north of the north line of W. One hundred and nineteenth street, on the west by the center line of S. Halsted street, and on the east by a line one hundred and twenty-five feet west of the west line of S. Wentworth avenue.

(u) All that territory described as follows: beginning at the intersection of a line one hundred and twenty-five feet south of the south line of E. One hundred and third street and a line one hundred and twenty-five feet west of the west line of S. Michigan avenue; thence west along said line one hundred and twenty-five feet south of the south line of E. One hundred and third street and W. One hundred and third street, to a line one hundred and twenty-five feet east of the east line of S. Wentworth avenue; thence south along said line one hundred and twenty-five feet east of the east line of S. Wentworth avenue, to a line one hundred and twenty-five feet north of the north line of W. One hundred and nineteenth street; thence east along said line one hundred and twenty-five feet north of the north line of W. One hundred and nineteenth street and E. One hundred and nineteenth street, to a line one hundred and twenty-five feet west of the west line of S. Michigan avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Michigan avenue, to a line one hundred and twenty-five feet south of the south line of E. One hundred and seventh street; thence west along said line one hundred and twenty-five feet south of the south line of E. One hundred and seventh street, to the center line of S. State street; thence north along the center line of S. State street to a line one hundred and twenty-five feet north of the north line of E. One hundred and seventh street; thence east along said line one hundred and twenty-five feet north of the north line of E. One hundred and seventh street, to a line one hundred and twenty-five feet west of the west line of S. Michigan avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Michigan avenue, to the point of beginning.

(v) All that territory described as follows: beginning at the intersection of the center line of W. One hundred and nineteenth street and the center line of S. Ashland avenue; thence south along the center line of S. Ashland avenue, to the center line of W. One hundred and twenty-third street; thence east along the center line of W. One hundred and twenty-third street, to the center line of S. Halsted street; thence south along the center line of S. Halsted street, to the center line of W. One hundred and twenty-seventh street; thence west along the center line of W. One hundred and twenty-seventh street, to the center line of S. Peoria street; thence south along the center line of S. Peoria street, to the southerly city limits, thence easterly and southerly and east along the southerly city limits of Chicago, to the Illinois-Indiana state line, thence north along the Illinois-Indiana state line, to the center line of E. One hundred and ninth street; thence west along the center line of E. One hundred and ninth street to the center line of S. Avenue D; thence south along the center line of S. Avenue D, to a line four hundred and ten feet north of the north line of E. One hundred and tenth street; thence west along said line four hundred and ten feet north of the north line of E. One hundred and tenth street to the easterly right of way line of the South Chicago and Southern Railroad, thence southerly along the easterly right of way line of the South Chicago and Southern Railroad to the center line of E. One hundred and twelfth street; thence west along the center line of E. One hundred and twelfth street to the center line of S. Avenue F; thence north along the center line of S. Avenue F, to the center line of E. One hundred and tenth street; thence east along the center line of E. One hundred and tenth street to a line one hundred and twenty-five feet east of the east line of S. Avenue F; thence north along said line one hundred and twenty-five feet east of the east line of S. Avenue F, to the center line of E. One hundred and eighth street; thence west along the center line of E. One hundred and eighth street to a line one hundred and twenty-five feet west of the west line of S. Avenue F; thence south along said line one hundred and twenty-five feet west of the west line of S. Avenue F, to the center line of

E. One hundred and ninth street; thence west along the center line of E. One hundred and ninth street to the center line of S. Avenue H; thence south along the center line of S. Avenue H, to the center line of E. One hundred and tenth street; thence west along the center line of E. One hundred and tenth street to a line one hundred and twenty-five feet east of the east line of S. Ewing Avenue; thence south along said line one hundred and twenty-five feet east of the east line of S. Ewing avenue to a line one hundred and twenty-five feet north of the north line of E. One hundred and twelfth street; thence east along said line one hundred and twenty-five feet north of the north line of E. One hundred and twelfth street to the center line of S. Avenue J; thence south along the center line of S. Avenue J, to a line one hundred and twenty-five feet south of the south line of E. One hundred and twelfth street; thence west along said line one hundred and twenty-five feet south of the south line of E. One hundred and twelfth street to a line one hundred and twenty-five feet east of the east line of S. Ewing avenue; thence south along said line one hundred and twenty-five feet east of the east line of S. Ewing avenue to the center line of E. One hundred and fourteenth street; thence west along the center line of E. One hundred and fourteenth street to a line one hundred and twenty-five feet west of the west line of S. Ewing avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Ewing avenue to a line one hundred and twenty-five feet south of the south line of E. One hundred and twelfth street; thence west along said line one hundred and twenty-five feet south of the south line of E. One hundred and twelfth street to the center line of S. Avenue L; thence north along the center line of S. Avenue L, to a line one hundred and twenty-five feet north of the north line of E. One hundred and twelfth street; thence east along said line one hundred and twenty-five feet north of the north line of E. One hundred and twelfth street to a line one hundred and twenty-five feet west of the west line of S. Ewing avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Ewing avenue to the center line of E. One hundred and ninth street; thence west along the center line of E. One hundred and ninth street to a line one hundred and twenty-five feet west of the west line of S. Buffalo avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Buffalo avenue to the center line of E. One hundred and eighth street; thence east along the center line of E. One hundred and eighth street, to the center line of S. Avenue M; thence north along the center line of S. Avenue M, to the center line of E. One hundred and sixth street; thence east along the center line of E. One hundred and sixth street, to the Illinois-Indiana state line, thence north along the Illinois-Indiana state line, to the shore of Lake Michigan, thence north along the shore of Lake Michigan, to the center line of E. Ninety-fifth street, extended east; thence west along the center line of E. Ninety-fifth street extended east, and E. Ninety-fifth street, to a line two hundred feet east of the east bank of the Calumet river; thence southerly along said line two hundred feet east of the east bank of the Calumet river, to the center line of E. One hundred and sixth street; thence west along the center line of E. One hundred and sixth street, to the southeasterly line of the right-of-way of the Pittsburgh, Fort Wayne and Chicago railway; thence northeasterly along the southeasterly line of the right-of-way of the Pittsburgh, Fort Wayne and Chicago railway, to the northeasterly line of the New York Central railroad; (Lake Shore and Michigan Southern railway) thence northwesterly along the northeasterly line of the New York Central railroad (Lake Shore and Michigan Southern railway) to a line one hundred and twenty-five feet west of the west line of S. Manistee avenue extended south; thence north along said line one hundred and twenty-five feet west of the west line of S. Manistee avenue extended south, to the center line of E. Eighty-ninth street; thence east along the center line of E. Eighty-ninth street, to the center line of S. Burley avenue; thence north along the center line of S. Burley avenue, to the center line of E. Eighty-third street; thence west along the center line of E. Eighty-third street to the center line of S. Brandon avenue, thence north along the center line of S. Brandon avenue, to a line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street; thence east along said line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street, to the shore of Lake Michigan; thence northwesterly along the shore of Lake Michigan to the center line of E. Sixty-seventh street; thence

west along the center line of E. Sixty-seventh street, to the center line of S. Cottage Grove avenue, thence north along the center line of S. Cottage Grove avenue, to the center line of E. Sixty-third street; thence west along the center line of E. Sixty-third street, to the center line of S. South Park avenue; thence south along the center line of S. South Park avenue, to the center line of E. Seventy-fifth street; thence east along the center line of E. Seventy-fifth street, to the center line of S. Cottage Grove avenue; thence south along the center line of S. Cottage Grove avenue, to a line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street; thence east along said line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street, to the east line of the right-of-way of the Illinois Central railroad, thence northeasterly along the east line of the right-of-way of the Illinois Central railroad, to the center line of E. Seventy-ninth street; thence east along the center line of E. Seventy-ninth street, to the center line of S. Stony Island avenue; thence south along the center line of S. Stony Island avenue, to a line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street; thence east along said line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street, to the center line of S. Yates avenue; thence south along the center line of S. Yates avenue, to a line one hundred and twenty-five feet south of the south line of E. Eighty-third street, thence west along said line one hundred and twenty-five feet south of the south line of E. Eighty-third street, to a line one hundred and twenty-five feet west of the west line of S. Yates avenue; thence south along said line one hundred and twenty-five feet west of the west line of S. Yates avenue, to the southwesterly line of the New York Central railroad (Lake Shore and Michigan Southern railroad); thence southeasterly along the southwesterly line of the New York Central railroad (Lake Shore and Michigan Southern railroad) to the center line of S. Colfax avenue; thence south along the center line of S. Colfax avenue, to the center line of E. Ninety-first street; thence west along the center line of E. Ninety-first street, to the center line of S. Stony Island avenue; thence north along the center line of S. Stony Island avenue, to the center line of E. Ninetieth street; then west, along the center line of E. Ninetieth Street, to the northeasterly line of the New York, Chicago and St. Louis railroad; thence northwesterly along the northeasterly line of the New York, Chicago and St. Louis railroad, to the center line of E. Eighty-third street; thence west along the center line of E. Eighty-third street, to a line one hundred and twenty-five feet southeasterly of the southeasterly line of the right-of-way of the Illinois Central railroad; thence southwesterly along said line one hundred and twenty-five feet southeasterly of the southeasterly line of the right-of-way of the Illinois Central railroad, to the center line of E. Eighty-seventh street; thence west along the center line of E. Eighty-seventh street, to a line one hundred and twenty-five feet west of the west line of S. South Park avenue; thence south along said line one hundred and twenty-five feet west of the west line of S. South Park avenue, to the center line of E. Ninety-fifth street; thence east along the center line of E. Ninety-fifth street, to a line one hundred and twenty-five feet southeasterly of the southeasterly line of the right-of-way of the Illinois Central railroad; thence northeasterly along said line one hundred and twenty-five feet southeasterly of the southeasterly line of the right-of-way of the Illinois Central railroad, to a line one hundred and twenty-five feet north of the north line of E. Ninety-fifth street, thence east along said line one hundred and twenty-five feet north of the north line of E. Ninety-fifth street, to a line one hundred and twenty-five feet east of the east line of S. Stony Island avenue; thence south along said line one hundred and twenty-five feet east of the east line of S. Stony Island avenue, to the shore of Lake Calumet, thence southwesterly, southerly and southeasterly along the shore of Lake Calumet to the center line of E. One hundred and twenty-seventh street, thence west along the center line of E. One hundred and twenty-seventh street, to the northeasterly line of the right-of-way of the Michigan Central railroad, thence northwesterly along the northeasterly line of the right-of-way of the Michigan Central railroad, to the center line of E. Kensington avenue; thence west along the center line of E. Kensington avenue, to the center line of S. Indiana avenue; thence north along the center line of S. Indiana avenue, to a line one hundred and twenty-five feet south of the south line of E. One hundred and seventh street; thence west along said line one hundred and twenty-five feet south of the south line of E. One hundred and seventh street, to a line one hundred and twenty-five

feet east of the east line of S. Michigan avenue; thence south along said line one hundred and twenty-five feet east of the east line of S. Michigan avenue, to the center line of W. One hundred and twenty-seventh street; thence west along the center line of W. One hundred and twenty-seventh street to a line one hundred and twenty-five feet west of the west line of S. Michigan avenue; thence north along said line one hundred and twenty-five feet west of the west line of S. Michigan avenue to a line one hundred and twenty-five feet south of the south line of E. and W. One hundred and nineteenth street; thence west along said line one hundred and twenty-five feet south of the south line of E. and W. One hundred and nineteenth street, to a line one hundred and twenty-five feet west of the west line of S. Morgan street; thence north along said line one hundred and twenty-five feet west of the west line of S. Morgan street to the center line of W. One hundred and nineteenth street; thence west along the center line of W. One hundred and nineteenth street, to a point of beginning.

Also all that territory bounded as follows: N. Avondale avenue; the alley next east of and most nearly parallel to N. Ozanam avenue; a line drawn through a point 18 feet $2\frac{1}{2}$ inches south of N. Avondale avenue at the alley next east of N. Ozanam avenue to a point 35 feet south of N. Avondale avenue at the east line of N. Ozanam avenue; and N. Ozanam avenue.

Also all that territory bounded as follows: W. Palatine avenue, or the line thereof if extended; N. Overhill avenue; W. Talcott avenue; and N. Canfield avenue.

(w) All that territory bounded on the north by the center line of E. One hundred and fourteenth street; on the south by the center line of E. One hundred and eighteenth street; on the west by a line one hundred and twenty-five feet west of the west line of S. Buffalo avenue; on the east by a line one hundred and twenty-five feet east of the east line of S. Avenue O.

(x) All that territory hereinafter described as within the provisional fire limits. [Amend. Coun. J. 12-21-39, p. 1488; 5-15-40, p. 2536; 5-22-40, p. 2574; 6-5-40, p. 2649; 12-3-40, p. 3620; 2-5-41, p. 4221; 2-26-41, p. 4330; 4-23-41, p. 4648; 3-11-42, p. 6775; 5-13-42, p. 7017; 11-10-44, p. 2465; 9-10-48, p. 2862; 7-8-49, p. 4532.]

89-3. The territory embraced within the provisional fire limits of city shall be as follows:

(a) All that territory bounded on the north by the center line of N. Rogers avenue, on the south by the center line of W. Devon avenue and Sheridan road, on the west by the east line of the right-of-way of the Chicago and Northwestern railway, and on the east by Lake Michigan.

(c) All that territory bounded on the northeast by the northeasterly line of the right-of-way of the New York Central railroad (Lake Shore and Michigan Southern railway), on the west by the center line of S. State street, on the south by the center line of E. Marquette road.

(d) All that territory bounded on the north by the center of E. Eighty-seventh street, on the south by the center line of E. Ninety-fifth street, and on the west by a line one hundred and twenty-five feet west of the west line of S. South Park avenue, and on the east by a line one hundred and twenty-five feet southeast of the southeasterly line of the right-of-way of the Illinois Central railroad.

(e) All that territory described as follows: beginning at the shore of Lake Michigan and the center line of E. Sixty seventh street; thence west along the center line of E. Sixty-seventh street, to the center line of S. Cottage Grove avenue; thence north along the center line of S. Cottage Grove avenue, to the center line of E. Sixty-third street; thence west along the center line of E. Sixty-third street, to the center line of S. South Park avenue; thence south along the center line of S. South Park avenue, to the center line of E. Seventy-fifth street; thence east along the center line of E. Seventy-fifth street, to the center line of S. Cottage Grove avenue; thence south along the center line of S. Cottage Grove avenue, to a line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street; thence east along said line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street, to the east line of the right-of-way of the Illinois Central railroad; thence northeasterly along the east line of the

right-of-way of the Illinois Central railroad, to the center line of E. Seventy-ninth street; thence east along the center line of E. Seventy-ninth street, to the center line of S. Stony Island avenue; thence south along the center line of S. Stony Island avenue, to a line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street; thence east along said line one hundred and twenty-five feet south of the south line of E. Seventy-ninth street, to the shore of Lake Michigan; thence northwesterly along the shore of Lake Michigan to the point of beginning.

(f) All that territory bounded on the north by the center line of W. Sixtieth street, on the south by the center line of W. Sixty-fifth street, on the west by the center line of S. Harlem avenue, on the east by the center line of S. Narragansett avenue.

(g) All that territory described as follows: commencing at the intersection of the Illinois Indiana State Line and the center line of E. 109th street; thence west along the center line of E. 109th street to the center line of South Avenue "D"; thence south along the center line of S. Avenue "D" to a line 410 feet north of the north line of E. 110th street; thence west along said line 410 feet north of the north line of E. 110th street to the easterly right of way line of the South Chicago and Southern Railroad; thence southerly along the easterly right of way line of the South Chicago and Southern Railroad to the center line of E. 112th street; thence west along the center line of E. 112th street to the center line of S. Avenue "F"; thence north along the center line of S. Avenue "F" to the center line of E. 110th street; thence east along the center line of E. 110th street to a line 125 feet east of the east line of S. Avenue "F"; thence north along said line 125 feet east of the east line of S. Avenue "F" to the center line of E. 108th street; thence west along the center line of E. 108th street to a line 125 feet west of the west line of S. Avenue "F"; thence south along said line 125 feet west of the west line of S. Avenue "F" to the center line of E. 109th street; thence west long the center line of E. 109th street to the center line of S. Avenue "H"; thence south along the center line of S. Avenue "H" to the center line of E. 110th street; thence west along the center line of E. 110th street to a line 125 feet east of the east line of S. Ewing avenue; thence south along said line 125 feet east of the east line of S. Ewing avenue to a line 125 feet north of the north line of E. 112th street; thence east along said line 125 feet north of the north line of E. 112th street to the center line of S. Avenue "J"; thence south along the center line of S. Avenue "J" to a line 125 feet south of the south line of E. 112th street; thence west along said line 125 feet south of the south line of E. 112th street to a line 125 feet east of the east line of S. Ewing avenue; thence south along said line 125 feet east of the east line of S. Ewing avenue to the center line of E. 114th street; thence west along the center line of E. 114th street to a line 125 feet west of the west line of S. Ewing avenue; thence north along said line 125 feet west of the west line of S. Ewing avenue to a line 125 feet south of the south line of E. 112th street; thence west along the center line of E. 112th street to the center line of S. Avenue "L"; thence north along the center line of S. Avenue "L" to a line 125 feet north of the north line of E. 112th street; thence east along said line 125 feet north of the north line of E. 112th street to a line 125 feet west of the west line of S. Ewing avenue; thence north along said line 125 feet west of the west line of S. Ewing avenue to the center line of E. 109th street; thence west along the center line of E. 109th street to a line 125 feet west of the west line of S. Avenue "L"; thence north along said line 125 feet west of the west line of S. Avenue "L" to the center line of E. 108th street; thence west along the center line of E. 108th street to the center line of S. Avenue "M"; thence north along the center line of S. Avenue "M" to the center line of E. 106th street; thence east along the center line of E. 106th street to the Illinois and Indiana State Line; thence north along the Illinois and Indiana State Line to the shore of Lake Michigan; thence north along the shore of Lake Michigan to the center line of E. 95th street, extended east; thence west along the center line of E. 95th street, extended east, and E. 95th street to a line 200 feet east of the east bank of the Calumet River; thence southerly along said line 200 feet east of the east bank of the Calumet River to the center line of E. 106th street; thence west along the center line of E. 106th street to the southeasterly

line of the right of way of the Pittsburgh, Ft. Wayne & Chicago Railway; thence northeasterly along the southeasterly line of the right of way of the Pittsburgh, Ft. Wayne & Chicago Railway to the northeasterly line of the New York Central Railroad (Lake Shore & Michigan Southern Railway); thence northwesterly along the northeasterly line of the New York Central Railroad (Lake Shore & Michigan Southern Railway) to a line 125 feet west of the west line of S. Manistee avenue extended south; thence north along said line 125 feet west of the west line of S. Manistee avenue extended south to the center line of E. 89th street; thence east along the center line of E. 89th street to the center line of S. Burley avenue; thence north along the center line of S. Burley avenue to the center line of E. 83rd street; thence west along the center line of E. 83rd street to the center line of S. Yates boulevard; thence south along the center line of S. Yates boulevard to the center line of E. 85th street; thence west along the center line of East 85th street to a line 125 feet west of the west line of S. Yates boulevard; thence south along said line 125 feet west of the west line of S. Yates boulevard to the southwesterly line of the New York Central Railroad (Lake Shore & Michigan Southern Railway); thence south-easterly along the southwesterly line of the New York Central Railroad (Lake Shore and Michigan Southern Railway) to the center line of S. Colfax avenue; thence south along the center line of S. Colfax avenue to the center line of E. 91st street; thence west along the center line of E. 91st street to the center line of S. Stony Island avenue; thence north along the center line of S. Stony Island avenue to the center line of E. 90th street; thence west along the center line of E. 90th street to the northeasterly line of the New York, Chicago & St. Louis Railroad; thence southeasterly along the northeasterly line of the New York, Chicago & St. Louis Railroad to a line 125 feet north of the north line of E. 95th street; thence east along said line 125 feet north of the north line of E. 95th street to a line 125 feet east of the east line of S. Stony Island avenue; thence south along said line 125 feet east of the east line of S. Stony Island avenue to the shore of Lake Calumet; thence southerly along the shore of Lake Calumet to its intersection with the east line of Section 26, Township 37 North, Range 14, East of the third principal meridian (center line of S. Stony Island avenue); thence south along the said section line (center line of S. Stony Island avenue) to the center line of E. 130th street; thence east along the center line of E. 130th street to the center line of S. Avenue "O"; thence south along the center line of S. Avenue "O" to the south city limits; thence east along the said south city limits to the Illinois-Indiana State Line; thence north along the Illinois-Indiana State Line to the place of beginning.

(i) All that territory bounded on the north by the center line of E. One hundred and thirtieth street, on the east by the Michigan Central Railroad, on the south by the Calumet River, and on the west by the Chicago and Western Indiana Railroad.

(j) All that territory lying between W. 64th and W. 65th streets, and S. Kenneth and S. Kilbourn avenues.

(k) All that territory within the limits of the ninth ward.

[Amend. Coun. J. 7-11-40, p. 2785; 2-5-41, p. 4221; 2-5-41, p. 4261; 4-23-41, p. 4648; 12-6-44, p. 2530; 9-10-48, p. 2851; 1-14-49, p. 3701; 3-24-50, p. 6017.]

89-4. The superintendent of maps shall prepare or cause to be prepared a master map on which shall be accurately indicated the area and boundaries of the fire limits and of the provisional fire limits established by this code. He shall correct said map so as accurately to portray the fire limits and the provisional fire limits whenever a change is made by ordinance, and supply a copy of such corrected map to the commissioner of buildings, the city clerk and the zoning board of appeals.

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